

COMPUTER APPLICATIONS in Ontario Government Libraries



Ontario Government
Libraries' Council

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**COMPUTER
APPLICATIONS
in**

**Ontario
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Libraries**

**Edited by
Brian H. Morrison**

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Libraries' Council**

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**Essays in Memory of
Douglas Alan Armstrong
1944-1983**



PREFACE

R. Brian Land,
Chairman,
Ontario Government Libraries' Council

Douglas Alan Armstrong, Head Librarian of the Ontario Ministry of Labour Library, was only 39 when he was struck and killed by a car while on his way to work on the morning of December 7, 1983. Yet he had already made his mark in the library world. The inspiration for this collection of essays arose out of a desire by Doug's colleagues to give tangible recognition to the contribution he made to the development and improvement of library service in the Ontario government.

Doug Armstrong was born in Toronto on March 8, 1944. He graduated from Lawrence Park Collegiate Institute in Toronto and went on to the University of Western Ontario where he obtained the Bachelor of Arts degree in 1966. The following year, he graduated from the University of Toronto with the degree of Bachelor of Library Science and, in 1970, he received the Master of Library Science degree from the University of Toronto.

Doug began his library career in 1967 as a cataloguer at the University of Waterloo Library. In 1968, he moved to the cataloguing department of the Metropolitan Central Library in Toronto. On July 27, 1970, he joined the staff of the Ontario Ministry of Labour Library as Assistant Librarian. He was appointed Acting Librarian on December 1, 1972 and Librarian in December 1973. When the libraries of the Occupational Health and Safety Branch of the Ministry of Health and the Mining Health and Safety Branch of the Ministry of Natural Resources were amalgamated with the Ministry of Labour Library, Doug was appointed Head Librarian, the position he held at the time of his death.

Doug was an active member of the Toronto Chapter of the Special Libraries Association and of the Committee of Industrial Relations Librarians,

an international group whose Conference he hosted in Toronto in 1981. But it was his work with the Ontario Government Librarians' Council (since renamed the Ontario Government Libraries' Council) which involved him most closely with his colleagues in Ontario government libraries. He served as Chairman of the Ontario Government Librarians' Council for 1974-1975 and was active in the work of several Council committees as indicated below:

October 1971 - September 1972	Member, Continuing Education/Program Committee
October 1972 - September 1973	Chairman, Continuing Education/Program Committee
October 1973 - September 1974	Vice-Chairman, Executive Committee
October 1973 - September 1974	Member, Program Committee
October 1974 - September 1975	Chairman, Executive Committee
October 1975 - September 1976	Past Chairman, Executive Committee
April 1979 - March 1980	Member, Directory Committee
December 1979 - March 1981	Member, Ad Hoc Committee to Develop a Proposal for Automated Cataloguing
April 1980 - March 1981	Member, Directory Committee
April 1979 - March 1980	Member, Union List of Serials Update Committee
April 1981 - March 1982	Member, Union List of Serials Update Committee
April 1982 - March 1983	Member, Union List of Serials Update Committee
April 1982 - March 1983	Director, Executive Committee

One of Doug's special professional interests was the application of the computer technology to libraries. The Ministry of Labour Library is a testimonial to this interest and provides an excellent example of the application of automated systems in libraries. It is appropriate, therefore, that this volume of essays surveys computer applications in Ontario government libraries and is dedicated by his colleagues to the memory of

Douglas Armstrong. And it is fitting that a member of the staff of the Ministry of Labour Library, Brian Morrison, is its editor.

Another of Doug's professional interests was his support of the Faculty of Library and Information Science at the University of Toronto. Whenever possible he was glad to speak to groups of students and to open the Labour Library for tours or seminars. The Library often provided summer or part-time employment to library science students and technicians. In recognition of his interest and dedication, the Douglas Armstrong Memorial Fund has been established at the Faculty of Library and Information Science to award an annual scholarship in modern technology for special libraries.

EDITOR'S FOREWORD

Brian H. Morrison,
Reference Librarian,
Ontario Ministry of Labour

It was a pleasure to be asked by the Ontario Government Libraries' Council to edit this collection of essays in memory of Douglas Armstrong. All of us at the Ministry of Labour Library were shocked and saddened by Doug's tragic death. His career was abruptly ended at only its mid-point. He was committed to improving library and information services both within the Ministry and among all provincial government libraries. This commitment led to his active interest in automated systems. At a more personal level, he was a fine person with whom to work, always understanding and supportive. It is my hope that these essays will honour Doug's memory by providing practical insights for those libraries considering the implementation of automated systems. The writers of these essays have been asked to relate their experiences with several different systems and to discuss how a particular system was chosen to meet the needs of their library.

I would like to thank the contributors for agreeing to find the time to write these essays. A special thanks goes to Elaine Watson and Dee Dylan for producing the final typescript and to those responsible for the design and printing of the collection.

LIST OF CONTRIBUTORS

Mavis Cariou,
Senior Tutor, Faculty of Library and Information Science, University of Toronto

Marian Dworaczek,
Assistant Head Librarian, Ontario Ministry of Treasury and Economics

R. Brian Land,
Director, Ontario Legislative Library
Chairman, Ontario Government Libraries' Council

Dolly Lyn,
Reference Librarian, Ontario Ministry of Labour

Clare Lyons,
Librarian, Ontario Labour Relations Board

Alison Macintosh,
Marketing Representative, UTLAS Inc.

J. Mark Merryweather,
Librarian, Ontario Police Commission

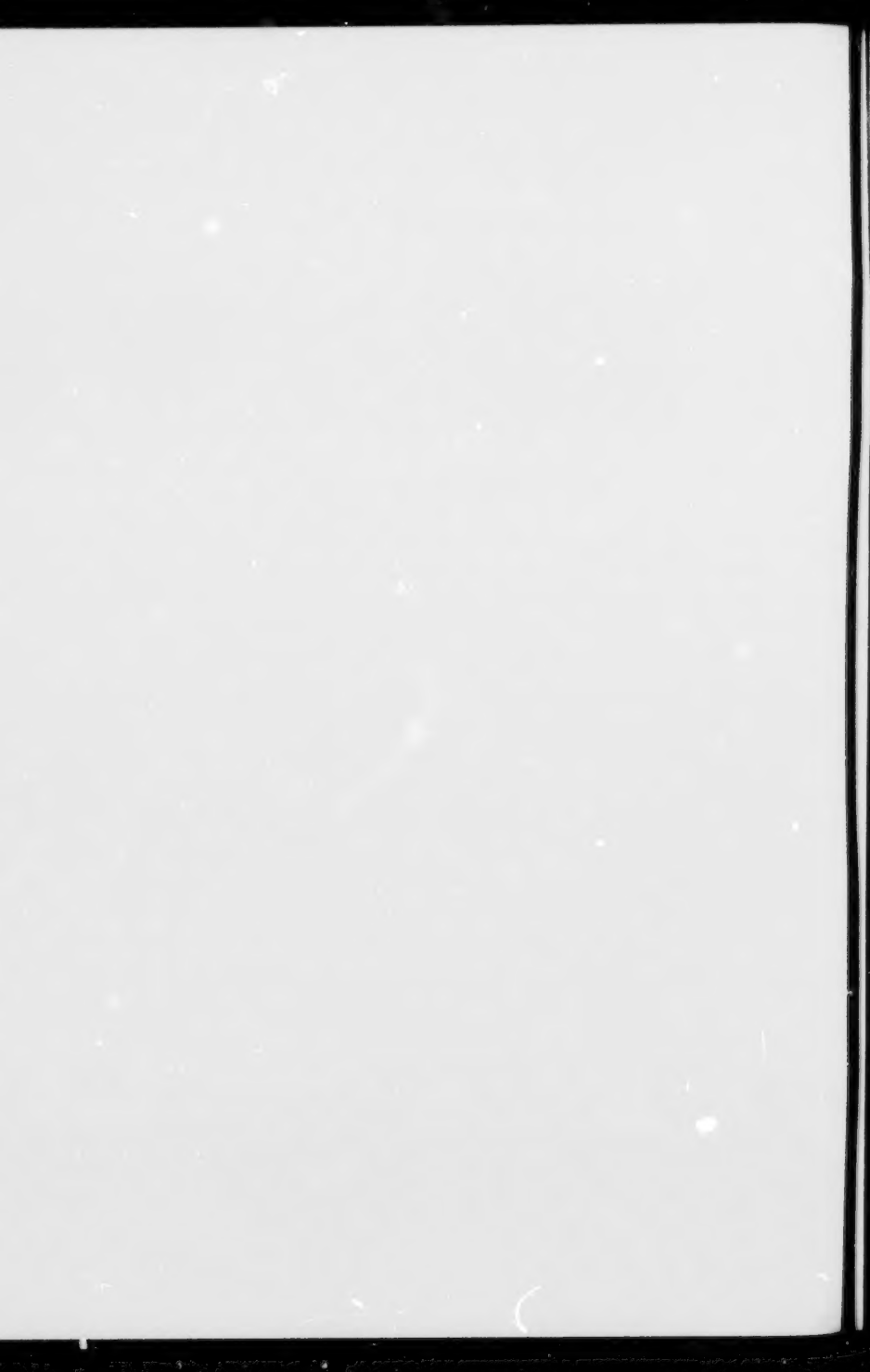
Lynn Morgan,
Systems Librarian, Ontario Legislative Library

Brian H. Morrison,
Reference Librarian, Ontario Ministry of Labour

Ilze Purmalis,
ONTERIS, Ontario Ministry of Education

Pamela Stoksik,
Head, Technical Services and Systems, Ontario Legislative Library

Sandra Walsh,
Manager, Library Services, Ontario Ministry of Community and Social Services



Education for Automation

Mavis Cariou,
Senior Tutor, Faculty of Library and Information Science,
University of Toronto

"And if you take one from three hundred and sixty-five,
what remains?"

"Three hundred and sixty-four, of course."

Humpty-Dumpty looked doubtful. "I'd rather see
that done on paper" he said.

Librarians can sympathize with Humpty Dumpty but they have begun to look doubtfully at "on paper" methods also. They have begun to suspect that automated circulation, acquisition or serials systems might improve the library's services - and its image. They have begun to weigh the advantages and disadvantages of online information retrieval services compared to traditional services based on paper indexes and catalogues.

As they explore the capabilities and costs of the technology of a paperless society,² they feel like Alices in Computerland, puzzled and perplexed by a multitude of questions about a rapidly changing world. Is an instant screen display preferable to print on paper? Can microtechnology enable small libraries to provide automated services that were previously possible only in libraries with access to mainframe computers? Should the automation of a library be implemented on the basis of a grand overall design that integrates all functions so that any information need be entered only once into the system? Or should the automation of library functions be implemented piecemeal, as the need arises and as the technology and costs permit? Should librarians be their own system analysts, designers and programmers? Or should they engage experts to design their systems? Or

should they buy commercial, off-the-shelf software packages and adapt them to their own library needs? Can libraries use word processing or database management programs to create their own acquisitions lists and serial check-in forms? Can microcomputers and telecommunications be combined to improve the interlibrary loan process?

LIBRARY AND INFORMATION SCIENCE DEGREE PROGRAMS

As librarians seek answers to such questions, they become aware of their need for more knowledge and skills related to information and communication technologies. While it is not essential - and probably not even wise in some cases - for librarians to be their own systems analysts or programmers, it is useful for them to be knowledgeable about the theories and techniques involved in these aspects of automation. Those who have successfully completed courses in systems analysis or programming, who have absorbed the concepts and principles from the lectures and assigned readings, who have struggled with the problem sets and other assignments are prepared to communicate with systems staff, consultants, and commercial vendors. These librarians are familiar with the terminology, are aware of the levels of accuracy and comprehensiveness of detail required, are appreciative of the tradeoffs between the costs and the benefits of routines to handle exceptions, and are acutely conscious of the necessity of excellence of documentation in computer based systems.

A number of other aspects of automation are of increasing importance to library practitioners and educators. For example, librarians working in public service are concerned about the rationale for, the methodology of, and the problems associated with online information retrieval. Courses on online reference service develop an understanding of the differences between online and traditional services in terms of retrieval speed, scope, format and costs, and they also develop a knowledge of the available online databases and the techniques for manipulating them. As awareness has grown about the role of database structures and management in determining the effectiveness and efficiency of information storage and retrieval systems, there has been a corresponding growth in the number of courses offered on databases, from

both theoretical and practical points of view. The courses may be devoted purely to database design and management, may be focused on information storage and retrieval but include segments on database structures, or may be microcomputer oriented with some attention paid to commercial database management packages. Other librarians who specialize in the design and maintenance of information systems and are concerned with such issues as the evaluation of information systems or the role of standardization in networking require courses such as library systems design, automation of library and information services, and communication and computer technologies. In addition, library practitioners and educators have perceived that rapid developments in the miniaturization of electronic components promise new solutions to old library and information service problems and that courses on microcomputer systems and their uses are essential today. The calendars of the library and information science schools indicate their response to these professional education needs; the transcripts of new graduates indicate their awareness of these new professional responsibilities.

RELATED DEGREE PROGRAMS

Those who are currently working on library and information science degrees, or about to do so, are able to enrol in an integrated set of courses that will give them the knowledge and skills necessary for the provision of automated services. Those who have already completed their degree programs may find themselves somewhat unprepared to exploit fully the capabilities of the new technologies or to cope with the complex information problems of users today. These librarians may consider entering programs for advanced degrees in library and information science or for degrees in related areas, such as business administration which offers a specialization in management information systems. This avenue has now been made more attractive by the decision to offer most graduate programs on a part-time basis so that employees can retain their jobs and their salaries as they improve their qualifications. It also means that librarians can bring the problems of the workplace to the discussion of theory and can apply classroom theory to their own real world situations. Librarians, who for a variety of reasons, cannot

enrol in a degree program but who wish an organized program of studies may now elect the new certificate course in information studies offered by Ryerson Polytechnical Institute in Toronto.

SPECIAL STUDENTS

Other librarians feel the need not so much for degree programs as for specific courses to complement or supplement their original professional education. Even rather recent graduates may find themselves lacking in areas such as microcomputer systems or online retrieval. It is possible, under certain conditions, to enrol as a special student in courses in both the graduate and the undergraduate programs. The special student is a student who is not working towards a degree but who undertakes all the course work, including assignments, and receives a grade for the course. Librarians who are interested in courses such as the following should consult the appropriate admissions officer: Library Systems Analysis at the University of Toronto's Faculty of Library and Information Science; Implications of New Technologies for Library and Information Managers at the University of Western Ontario's School of Library and Information Science; Technology of Management Information Systems at Toronto's Faculty of Management Studies; Personal Computing and Education at the Ontario Institute for Studies in Education; Information Systems Analysis and Design in Toronto's undergraduate Computer Science program. For courses in the professional faculties, the admissions office at the School of Graduate Studies should also be consulted. It is wise to seek information as early as possible, at least three months in advance, since the process of becoming a special student is unfortunately rather slow though relatively painless. Applicants may find that there are few places for special students in some popular courses; they may also find that classes are not held at convenient times. However, it is true that more courses are now being given in late afternoon and early evening hours and that some faculties now advertise the availability of their degree courses as continuing education courses. It is possible to enrol, in a similar fashion, as a special student in computer courses in the regular programs of Ryerson Polytechnical and the community colleges of Ontario.

CONTINUING EDUCATION COURSES AND WORKSHOPS

Another method of upgrading professional qualifications is to enrol in continuing education courses. These courses, covering a wide range of topics and presented in a variety of formats, are particularly attractive to practicing librarians for a number of reasons. The courses are usually open to all, without prerequisites of any kind. They are usually short in duration, one half day to a weekend; but they may entail as many as fourteen evenings spread out over four months. They are usually topical because they respond to requests from practitioners as well as to proposals from experts. They usually have a practical orientation; librarians can often apply the newly acquired techniques to immediate problems in their own libraries.

These continuing education courses or workshops are sponsored by a variety of organizations: faculties of library and information science, community colleges, library and information science associations, and private companies. Informal discussions with librarians in the Toronto area about education for automation made it clear that continuing education courses have become more important in the professional lives of librarians.³ The librarians spoke of courses taken from several different sources. They cited courses at Toronto's Faculty of Library and Information Science, such as the four-session course on Online Information Retrieval which has been given several times a year for the last three years; Bits & Bytes, the one-day course on microcomputers; and Management of Library Automation which consisted of one evening a week for twelve weeks. They also commented on the usefulness of continuing education courses at community colleges, in particular the introductions to microcomputers and to databases at Sheridan College and the microcomputer basics, programming, and systems analysis courses at Humber College.

Library associations were also found to be responsive to the practitioner's needs for continuing education. The workshop organized by the Micro Guild of the Ontario Library Association, Getting the Most from Your Microcomputer, was favourably mentioned as were the three workshops on microcomputers and databases organized by Toronto's Library Science Alumni Association. In addition, one librarian pointed out that some privately owned

companies, such as Human Resources Incorporated, offer courses of value to librarians. The vendors of commercial database systems also offer courses as do vendors of automated library systems. Because these commercial courses are sometimes expensive or available to groups only, the employer may choose to sponsor the courses and so ensure a high level of expertise among all the staff. A new provider of courses that may be attractive to librarians in the Toronto area is the federally funded Computer Centre at Harbourfront which offers, at cost, courses such as Introduction to Lotus 1-2-3.

ASSOCIATION MEETINGS AND CONFERENCES

A related form of continuing education is the regular meeting and the annual conference of library and information science associations. A small part of each meeting or conference consists of association business, but the major emphasis is on professional information sharing and education. The librarians in the previously mentioned discussion almost unanimously identified the meetings of the Special Libraries Association (SLA) and the Canadian Association for Information Science (CAIS) as being important in keeping them up-to-date professionally. One suggested that the CAIS meetings are particularly important for identifying issues that need discussion, that are on the brink of becoming the focus of widespread interest. Many of the librarians attend not only the local chapter meetings of SLA but also the annual international convention with its preconference and conference workshops, many of which are focused on aspects of automation. The annual meetings of the American Society for Information Science (ASIS) and ONLINE conferences were also cited for their contribution to professional development. The librarians referred to Forthcoming Meetings as a convenient source of information about meetings, conferences, and continuing education courses and workshops.⁴

The meetings of more informal groups can contribute to self-education too. The librarians in the Sheridan Research Park complex in Mississauga have formed a group which meets regularly, with education, particularly in automation, as its chief objective. There was unanimous agreement among the members of the group contacted that the objective is being realized. The meetings of computer user groups such as the Commodore PET or the IBM PC

were also mentioned by some librarians as being useful for learning about technical and software matters. It was pointed out, however, that the users are a varied group who sometimes do not have common levels of interest. The value of the meeting to the librarians is very much dependent on the type of user attracted. Nevertheless, some librarians find that user groups do foster the exchange of ideas between professions and lead to the creative use of computers for library purposes.

PRINT LITERATURE

A conventional and still profitable form of self education - even for automation - is the "on paper" type: books, research reports, magazines, and even promotional literature. Meetings and conferences, formal courses and informal workshops are useful not only for the direct contribution they make to the development of knowledge and skills but also for their indirect contribution through the identification of significant authors, books, and journals which librarians may use on their own for professional development. Magazines are especially important to those who must keep abreast of developments in the rapidly changing information and communications fields. The librarians previously referred to agreed that magazines are essential in maintaining professional standards of expertise. Among the magazines read or scanned regularly by members of the group are the following: Byte, Computing Reviews, Datamation, InfoAge: Canada's Business Micro Magazine, InfoWorld, Library Hi-Tech, ONLINE, Popular Computing, Small Computers in Libraries, Software Review, and magazines dedicated to specific brands of computers, such as the Apple Incider or Nibble, or the IBM PC Magazine or PC World. They find the articles, regular columns, product reviews and advertisements all useful for keeping up-to-date on theoretical and practical matters or for locating further sources of information.⁵

INFORMAL NETWORK

An even older method of education than the "on paper" variety, and probably still one of the most popular and productive types, is the face to face, person to person exchange of information. It allows the "teacher" to

individualize the information to the needs of the "student" and permits the "student" to control the process, directly by asking for amplification, clarification, or repetition, and indirectly by puzzled looks or audible hesitations which alert the "teacher" to difficulties. It requires a minimum of preliminary setting of frameworks and definitions and so is usually brief and to the point, within the conventions of social exchange. How are "teacher" and "student" brought together? Conventions, meetings, workshops, and continuing education courses are useful not only for their formal presentations but also for the opportunity they afford for librarians to talk to and establish relationships with others interested in the same subjects or problems. Similarly books, reports, and magazines, may introduce librarians to those with common concerns. Or librarians seeking solutions to problems turn to their co-workers and are referred to the experimenters, innovators and gatekeepers. Enthusiasts introduce their associates to new-found fellow enthusiasts. And so the network grows. The librarians consulted appreciated its value; one said "The network is everything." Everything indeed: immediate advice on how to solve a problem, referral advice about whom or what to turn to for information, informed opinion on which conferences to attend, which journals to read, which associations to join. The informal network, like the scientist's invisible college,⁶ disseminates information about innovations. However, the value of the information supplied is very much dependent on the state of knowledge of the person consulted and on the awareness of that person of his or her own limitations. Despite this caveat, the network is important, and this importance is reflected in the establishment of its computer counterpart, the electronic bulletin board which has been used to exchange all kinds of information including the texts of entire articles which members found stimulating and provocative.

HANDS-ON EXPERIENCE

Lastly, experimentation with computer equipment, computer software, and communication devices is a form of self-education which should not be overlooked. The librarians consulted find that working with their home computers and with computers in the workplace enhances their competencies.

The process of discovery can be frustrating but it is ultimately satisfying and it makes other formal and informal education methods more meaningful and productive.

CONCLUSION

Education for automation is a loosely knit system that has evolved in response to the needs of librarians, to the objectives of educational institutions, and to the changing realities of the information world. In order for this system to work, librarians must recognize their professional responsibility to seek out the appropriate educational experiences; library educators and associations must recognize their responsibility to provide the required courses and workshops, meetings and conferences; and employers must recognize their responsibility to provide the time, the funds and the encouragement to enable librarians to avail themselves of these educational opportunities. It is only by the recognition of responsibility on the part of all three sectors that librarians and libraries can avoid a Humpty Dumpty fall from a wall - of paper - into pieces that can't be put together again.

FOOTNOTES

¹Lewis Carroll, Adventures through the Looking-Glass, in Alice's Adventures in Wonderland and Adventures through the Looking-Glass, New York, Macmillan, 1926, p. 86.

²F.W. Lancaster, Toward Paperless Information Systems, New York, Academic Press, 1978.

³The help of the following is gratefully acknowledged: Betty Bassett (Xerox), Gwen Galton (Atomic Energy), Ellen Jones (Toronto's Faculty of Library and Information Science), Rebecca Jones (Imperial Oil), Brian Morrison (Ontario Ministry of Labour), Jeanne Smith (Ontario Institute for Studies in Education), George Shirinian (York Public Library), Mary Stevens (York University), Maggie Weaver (CIL), and Marion Wilburn (Library Techniques, Sheridan College).

⁴Forthcoming Meetings, ed. by Ellen Jones, Faculty of Library and Information Science, University of Toronto, monthly.

⁵For a frequently revised list of periodicals consult Microcomputing Periodicals: an Annotated Directory, ed. by George Shirinian. It is available from the author at #2, 53 Fraserwood Avenue, Toronto, Ontario, M6B 2N6.

⁶Diana Crane, Invisible Colleges: Diffusion of Knowledge in Scientific Communities, Chicago, University of Chicago Press, 1972.

Installing an Online Catalogue at the Legislative Library

**Pamela Stoksik,
Head,
Technical Services and Systems, Ontario Legislative Library**

and by

**Lynn Morgan,
Systems Librarian, Ontario Legislative Library**

BACKGROUND INFORMATION

The impetus for the development of an automated support system at the Legislative Library came in 1977 from the Select Committee on the 4th & 5th Reports of the Commission on the Legislature. In his report as consultant to that Committee, Erik Spicer, Parliamentary Librarian, recommended that the Library increase its acquisitions, particularly in the area of government publications. He also recommended that the Library catalogue its government publications in order to make them more accessible. In 1978, the Library began to increase significantly its intake of government publications, thereby adding to the number of uncatalogued materials and intensifying the need for a better cataloguing system.

Prior to 1981, the Library catalogued only a very small percentage of its government acquisitions. Although these comprised 95% of holdings, only 2% were accessible through the Library's catalogue. This seriously affected the quality of service which could be offered by the Information and Reference staff. The public services offered by the Library had expanded significantly since 1977. Access to the Library's collections was not adequate to support the activities of these two areas. The problem was to find a cost-effective means of making its collection accessible to users and staff. Traditional

manual methods of cataloguing and catalogue maintenance were not a viable option because of the large investment in human resources required. The alternative was to take advantage of technological advances by automating cataloguing operations and providing access to the collection through the use of a computer-based system.

PLANNING

The Library undertook two feasibility studies as part of the initial planning phase for its automated support system. In the spring of 1979 an outside consulting firm was hired to study alternatives for automated processing of government documents within the Legislative Library. The resulting report presented a number of the alternatives available, and included generalized implementation outlines and costs for each alternative. The final recommendation of this consultant was to implement the CODOC scheme unless further study of the alternatives was desired. The Library chose the latter course, and conducted an in-house feasibility study which emphasized then-current library practices and procedures for bibliographic control of and access to the entire collection; the definition of specific requirements for bibliographic control and information retrieval; the evaluation of library practices and procedures to meet these requirements; the formulation of recommendations for action; and, the formulation of a generalized implementation plan.

This second study was prepared over a six month time period and completed in May 1980. Its general precepts were accepted by senior staff of the Library in the summer of 1980. The most significant of these precepts was that the Library adopt an online, interactive, automated support system which would incorporate the processing of all material received in the Library, regardless of source. This acceptance constituted the completion of the first major task in the planning phase of the system development cycle; that is, the generation of documentation which clearly demonstrated the need for the system and its requirements.

The second major task in the planning phase was the establishment of a planning budget which outlined estimated capital and operating costs for

the proposed system. To accomplish this task, the Library once again hired an outside consultant to act as an intermediary between it and potential suppliers. The budgeting process consisted of four steps: looking at the particular requirements of the Library; establishing which vendors/suppliers came closest to meeting those requirements; requesting estimated implementation costs from these suppliers; synthesizing the cost information received to arrive at the budget figure for planning purposes. Once this budget figure had been established, the Library sought approval-in-principle from the Board of Internal Economy of the Legislative Assembly for the continuation of the system development cycle. In November 1980, the Library received this approval in the form of a funding commitment for the next fiscal year.

The Library was now in a position to approach vendors with a Request for Proposal (RFP). In December 1980, letters were sent to three vendors. The RFP included the feasibility study which stated the requirements of a system for the Legislative Library and detailed the primary and secondary evaluation criteria which would be applied to the proposals. The letters also outlined the mandatory information to be included in the vendors' responses.

The evaluation committee which considered the proposals followed four steps. First, the committee went over the submissions. These were then refined on an individual basis through subsequent meetings with the vendors. Where necessary, vendors were asked to re-work their proposals. After attending demonstrations and/or site visits to actual users of the proposed systems, the committee arrived at a decision. A scoring algorithm was applied to each proposal in turn and the vendor with the highest overall score was successful. During the evaluation process, the Library had once again used the services of an outside consultant to advise the committee on the technical feasibility of the proposed system.

In June 1981, the Library began contract negotiations with Geac Canada Limited. The negotiations extended over a three month period. Five drafts of the contract were necessary before both parties agreed on terms. This was due to the specialized requirements of the Legislative Library. Unlike Geac's other customers, the Library was not interested in a circulation control

system, but a cataloguing support system and an online catalogue. Although the actual negotiation of the contract was carried out by two Library staff members (one of whom had a law degree), the Library also retained the services of a lawyer whose particular area of expertise was data processing. He advised the Library concerning the terms of the contract and commented on two of the draft versions.

The contract was signed on September 2, 1981 and the Library moved into the implementation phase.

IMPLEMENTATION

The hardware (equipment) arrived in November 1981 and was installed a month later. The initial installation included a Geac 6000 with three 160 megabyte disk drives, one Teletype 40 line printer, a Cipher Microstream tape drive, and twelve Informer terminals. (Later nine additional terminals were purchased, bringing the total number of online terminals to 21.) Special telephone lines were required to connect terminals in the Library, situated in the Legislative Building at Queen's Park, to the computer which was located in Technical Services and Systems two blocks away. In addition, a modem was installed which is used by Geac to dial into the computer to diagnose and fix problems and to install new software.

Once the hardware was installed, training began. This was done in a number of phases. First, cataloguers were trained to code records into machine-readable form. Several staff were trained as System Operators. Two new staff members were hired for data entry and were trained to use the data entry software. Finally, the rest of the Library staff were trained to search the database.

The Library had no records in machine-readable form and the cataloguers had to be trained to code records in the MARC format. This training took place in the fall of 1981, and the card catalogue was officially closed in November 1981.

Operations tasks were added to the regular duties of two library technicians in Technical Services and Systems. Their responsibilities include daily backups of the Library's files, running required programs on a daily basis

and monitoring the system. They also do preliminary diagnosis of problems before reporting them to the Systems Librarian.

The first version of Geac's MARC Record Management System (MRMS) was installed and the two data entry operators were trained in January 1982. By April, there were some 2,000 records in the database and the Reference staff were clamouring to be able to use the automated system and were anxious to gain access to recent records. Because the Online Catalogue was still in the development stage at Geac, the Library elected to temporarily install and use the Bibliographic Query function of Geac's Circulation system. The Reference staff used MRMS for about one month until the Circulation system could be properly installed in May 1982. For the next year, the staff used this software while waiting for the Online Catalogue to be released.

April 9, 1983 was a landmark day as the Online Catalogue was installed. This involved a conversion of not only the software but also of the bibliographic database, since there was some difference in the file structures. The files were converted over the weekend so that when the staff arrived Monday morning, the Online Catalogue was in place. Geac had been claiming that the Online Catalogue was so simple to use that training was not required. They were more or less correct. The Systems Librarian spent a few hours Monday morning in the Library giving small groups of staff a half-hour introduction. This was all that was required since the Online Catalogue prompts the user for information when necessary.

The installation of the Online Catalogue made it necessary to upgrade the MRMS software. This was as difficult and problematic as the Online Catalogue installation was easy. Although Geac was working on the problems constantly, two months' time on the data entry system was lost. Geac corrected the MRMS problems over the summer and data entry operations stabilized by the fall.

ONLINE CATALOGUE SYSTEM OVERVIEW

As of June 1984, the Online Catalogue module includes traditional access points such as author, title, and subject, in addition to a combined author/title index, keyword indexes for author, title, and subject and a variety of number

indexes such as call number, government document number, Library of Congress card number and international standard numbers. The system prompts the user through a series of screens until sufficient information has been entered for a search. For more experienced users, command chaining is available. There are also five function keys available: HELP, ADVANCED HELP, START OVER, PREVIOUS SCREEN, and END. Hitting one of these keys replaces typing in the equivalent command.

Three record display formats are available: brief, full, and MARC. The brief display includes author, title, imprint and holdings information with location and call number. This is the default display. The full display includes author, title, imprint, edition, physical features, subjects, notes, other authors, other titles, series, LCCN, ISBN, government document number, other numbers, and cataloguing source number. The Library has the option of defining which MARC tags are used for each display category. The MARC display format shows the bibliographic record with all MARC tags and subfields.

The system offers several noteworthy features. The command chaining facility allows the user to initiate a new search from any point in the current search process. For example, if a user is in the author index, a single command will enable him to move into any other index. Secondly, there is a help screen associated with every display screen. By hitting the HELP function key or typing in HELP, a screen is displayed which includes a description of what the user has just done, a list of all possible commands available at this point, and an explanation of any special symbols appearing on the screen. If a user enters three invalid commands in succession, the first two times the system displays a message, but the third time it displays a help screen. The third noteworthy feature is the ability to trace one's way back through the searching process using the PREVIOUS SCREEN function key or command. This command is valid for up to five previous screens.

In order to use the keyword search capability, the user must specify which index is to be searched: author, title, or subject. The system finds the word regardless of its position in the field. Currently, only a single word may be entered. The future Boolean function will allow multiple term

searching. In keyword searching, truncation must be specifically indicated using the hatch symbol. This differs from the regular indexes which assume truncation. Only right truncation is available. The Library also has the option of specifying stopwords which are not searchable.

SOFTWARE DEVELOPMENT

The Library is involved with testing new software and works closely with Geac's Library Division system programmers. The Legislative Library is the development site for Geac's Authority System. Although the Online Catalogue software was written to display see and see also references, the data entry system had to be extensively modified in order to handle creating and maintaining authority records, authorizing headings in bibliographic records, and printing appropriate reports. At the Library, a separate database was created to test the Authority module software. Testing will run throughout the spring and summer of 1984, and by the fall the software should be ready to "go live". The Library is also testing the software which creates tapes to be sent to the National Library of Canada's MARC Record Distribution Service (MRDS). At the present time, this is the only source of machine-readable records used by the Library to supplement its original cataloguing.

CHECKLIST AND CATALOGUE SERVICE

Since April 1980, the Library has had editorial responsibility for the Ontario Government Publications Monthly Checklist, the Catalogue des publications en francais du gouvernement de L'Ontario, and the Ontario Government Publications Annual Catalogue. A separate Checklist and Catalogue unit within the Library catalogues the items and prepares the copy for typesetting. Once the Library automated its cataloguing processes, it seemed logical to combine the efforts of the Checklist and Technical Services units to share records and to switch to an automated typesetting process for producing the publications. The Library contracted with Geac to develop special software which would extract records from the database, format the data, and create indexes for the publications. This information is then loaded onto a magnetic tape and sent to a typesetter who can handle text in

machine-readable form. Geac completed an initial study to determine the amount of programming involved in order to establish the cost of such a project. The Library then developed detailed specifications for the Geac programmers. Programming started in the spring of 1983 and by the following September, the first automated Checklist was produced. Fine tuning of the process and debugging of the software is still ongoing.

STAFF REACTION

Staff reaction to the introduction of automation was mixed. On the one hand, there was great anticipation; but there was also criticism and anxiety. With this anticipation came high expectations. The Reference staff were pleased to have access to items never before catalogued in the Library, including most of the government publications. Since the system implementation was phased, however, staff became frustrated when all features of the Online Catalogue were not immediately available. Many of the concerns that arose were cataloguing issues. The content of the bibliographic record became more important than it had been when there was a card catalogue. There was also a tendency in both Public Services and Technical Services staff to want the machine filing to match the manual filing system. Some staff members even went so far as to suggest that we refile our card files to conform to machine filing! The conceptual approach of most staff members was to relate the Online Catalogue to something they knew. As a result people had different preconceived notions about it. When these preconceptions were not fulfilled, there was a tendency to become critical.

Technical Services was the area most affected by the implementation of an automated system. Unlike automation projects at other libraries, the Legislative Library was not simply automating an existing process but developing a completely new program of services. The cataloguing staff had to be trained to code records in the MARC format and start cataloguing new types of material. At the same time, a new shelving scheme for government documents was introduced. This scheme is based on the same principles as the CODOC scheme, but was modified to meet the special requirements of the Legislative Library. Given all the changes in procedures, coupled with the

many new policies that were established, the staff handled the adaptation to automation very well, indeed.

The Library had knowingly purchased a system under development and was the second library to sign a contract with Geac for the Online Catalogue. As a result, the Library was the beta site for the Online Catalogue installation and the alpha site for the Authority module. Essentially, this meant using an untried system that still required debugging when delivered. The initial delivery schedule negotiated with Geac turned out to be unrealistic as the software development fell behind. This was actually both a blessing and a curse. Staff became impatient with the prolonged implementation schedule. It was difficult to make some cataloguing decisions when it was not known how the system would work in certain situations. On the other hand, the extension of time slowed down the rate of change for the staff in Technical Services and gave the Library more time to examine the impact of the transition to automation.

CONCLUSIONS

Although it is exciting to be working at the leading edge of technology, there are drawbacks to implementing a system which is under development. The process of automation is not glamorous. Planning is difficult when the details of a system's operation are unknown. Although a library may know the functional specifications of the future system, this is often not enough information to make policy decisions. In addition, the way in which the vendor chooses to implement features may change as the system is being developed and this impacts on the planning process. It is also difficult to train and prepare staff for the operation of a new system when there is no demonstration or test system on which to practise.

There were, however, several advantages to being a development site. The Library enjoyed a close working relationship with Geac. It received a high level of software support, in addition to excellent hardware support. Often, Geac programmers arrived at the Library to debug the test software in person. Frequent consultation with Geac programmers enabled the Library to influence the software development.

In retrospect, the Library has learned a number of important lessons. First, sufficient time should be allotted for the completion of each phase of the project, including hardware installation, staff training, and software implementation. Often libraries do not set realistic time frames so that when one deadline is missed, the entire schedule slips. Second, the contract should spell out detailed performance criteria. This clarifies the Library's requirements to the vendor and indicates the minimum acceptable level of performance. Third, there should be clear penalty clauses to recompense the library if the vendor does not meet contractual obligations. Fourth, the library needs to understand the level of support provided by the vendor, particularly for a turnkey system.

The implementation of an automated support system has resulted in many benefits to the library. In addition to improved and increased access to the contents of the collection, access to bibliographic records is faster than it would be in a card environment and there are more access points available. With current developments in file transfer at the National Library of Canada, the options for deriving catalogue records have expanded. Sharing records with the Checklist Unit has reduced duplication of effort. By purchasing a turnkey system, the Library may easily expand and upgrade its system as Geac further develops its software. But, perhaps the most significant benefit of the automation project has been the opportunity for job enrichment and staff development.

BASIS

at the Ontario Ministry of Labour Libraries

Dolly Lyn,
Reference Librarian, Ontario Ministry of Labour

and by

Clare Lyons,
Librarian, Ontario Labour Relations Board

PART I MOLINDEX

INTRODUCTION

In the fall of 1982, the Ontario Ministry of Labour Library together with its satellite library at the Ontario Labour Relations Board converted its indexing of serials and decisions from a manual to an online environment using the BASIS software. This paper, based on a speech by Douglas Armstrong, describes the experience of the Labour Library in its implementation of an automated system as well as the process through which approval was obtained from management.

BACKGROUND

In order to better understand the complex procedures which were a prelude to the introduction and implementation of an automated indexing system, it will be necessary to outline the history and reporting structure of the Labour Library. Until 1983, the Labour Library was part of the Ministry's Research Branch. As such, its head librarian reported to the Director of the

Research Branch. Funding or approval for any major library undertaking had to be obtained from the Research Director, who in turn obtained approval from the Assistant Deputy Minister of Program Analysis and Implementation.

The first attempt to introduce automation of some sort began in 1975. At that time, the Library prepared an in-depth cost-analysis of searching the commercial online databases. Funding for this was approved. The need for further automation was accelerated by events subsequent to this initial move. In 1977, the Occupational Health and Safety Division was established within the Ministry of Labour. This move had a tremendous impact on the public service area. Historically, the Library has always been open to the general public. The transfer of a fairly substantial new division to the Ministry of Labour intensified the pressure on an already strained public service staff to serve an expanded clientele of both Ministry and non-Ministry users. Because of the increasing workload, the Library sought and obtained funding to hire a library systems consultant to examine the existing Library's operations and to assess the feasibility of automated procedures for its various operations and system improvements. This review of the Library's procedures was addressed in two phases. Phase I addressed the issue of technical services while Phase II examined the public service area. The consultants' final reports outlined various recommendations and options which were available to the Ministry. These recommendations were reviewed in detail by an internal ministerial committee whose mandate was to investigate various library automated retrieval systems. The committee examined a number of different systems with a view to their possible application, both within the Ministry Libraries as well as other applications. The latter included the different types of quasi-court decisions handled by the Ministry. These decisions were from the Ontario Labour Relations Board, Employment Standards Branch, Office of Arbitration and the Ontario Human Rights Commission. These decisions were presently being indexed manually and accessible on 4" x 6" cards.

The final report was completed in early 1982. It recommended a 2-phase implementation plan. Phase I involved the automation of the Ministry Library's periodical indexing and the OLRB decisions. Phase II involved the decisions from the other branches previously mentioned. The funding required

to implement Phase I was sent for further examination to a Ministry Library Committee composed of senior Ministry of Labour management. This committee subsequently authorized the approval of funds for BASIS.

AUTOMATION OF INDEXING

Since 1973, the Labour Library has been selectively indexing the journals and conference proceedings it receives. However, the Occupational Health and Safety indexes dated back several decades prior to this. These indexes, one for Labour and another for Health and Safety, served different clientele and were kept separately. Access to each was through a manual card system by subject only. The Library committee examined various automated systems which could provide some of the following advantages:

- greater subject access through a combination of terms online;
- additional searching fields such as author, title, journal title and date;
- either online or batch inputting of records and similar editing capability;
- production of the monthly Library Bulletins (a by-product of indexing) currently produced manually on a word processor;
- production of special bibliographies which could be updated automatically;
- current awareness SDI service to Ministry personnel; and
- microfiche subject catalogues which could be produced and maintained in branches or regional offices as well as to be used by the general public in lieu of the existing index cards.

The internal library committee examined inhouse systems as well as service bureaus. The inhouse systems examined included MINISIS and EASY DATA, while the service bureaus included UTLAS, BASIS, MINISIS and COMSHARE. After examining the capabilities of these systems, the committee made its recommendations to the Library Review Committee. Alternate option packages which included costs were presented to this Committee. The option selected was to use the BASIS system for both the periodical indexing and the Decisions indexing. This activity was to be

reviewed in two years and reevaluated in terms of annual operating and storage costs. At that time, reconsideration would be given to the purchase of a computer.

BASIS

BASIS is the private file service operated by Infomart. It provides an online method of handling bibliographic information. The data records are indexed by fields selected by the client. Using simple commands, one is able to locate, manipulate and display any information required. Information can be located via the inverted index or by scanning the actual records.

BASIS provides controlled access to each individual private file. The security features allow one to define access authorizations individually by user, preventing unauthorized access to whole files, individual records within the files, and fields within the records. The BASIS central system has several modules. Among these are:

- | | | |
|-----------|---|---|
| Olive | - | Enter and modify records; |
| Forms | - | Facilitate batch loading and validation of input records; |
| Thesaurus | - | Allows for standardization of indexing vocabulary; and |
| Monitor | - | Provides statistical reports on database usage. |

The public service librarians, over a six month period from January to June 1982, met with representatives from Infomart to decide on the design of the periodical index database MOLINDEX. This was subsequently followed by a series of training sessions for public service staff involved in MOLINDEX for online inputting (OLIVE) and retrieval. During the transition from a manual to an online system, the Library's two monthly bulletins, which are by-products of the periodical indexing, continued to be produced on the word processor. No additional staff was required to maintain these services.

MOLINDEX TWO YEARS LATER

The general public and Ministry staff have adjusted well to using the microfiche author/subject output in lieu of index cards for information retrieval. The Library, through various publicity campaigns including open

houses to demonstrate these changes, emphasized the positive benefits of MOLINDEX such as author access and an online retrieval which permitted various search strategies and results. Regular SDI services have been offered to Ministry staff.

After MOLINDEX was implemented, other modifications to the design were made. One which was very effective was the creation of an online searchable "geo" field for geographic subdivisions thus permitting extensive geographical analysis without cluttering up the subject headings in the microfiche. Another major accomplishment was the creation of an online thesaurus, consisting of controlled subject headings. The three reference librarians worked closely with the database manager and two librarians on contract over a nine-month period to produce the thesaurus. The thesaurus permitted a more sophisticated online searching, since relationships were defined as related, narrow or broad. It also modernized various LC subject terms which had been difficult to search.

Over the last year, the MOLINDEX database was expanded through the batch input of approximately 28,000 retrospective records in selected subject areas from the manual card indexes. This was done with the assistance of two word processing operators hired through the COED program, a joint federal-provincial job creation program. Another change since its implementation was the switch to batch input via a MICOM word processor for current indexing. This has resulted in tremendous savings over the online input used previously. Approximately six hundred new citations are added to the database each month.

FUTURE CONSIDERATIONS

The Library has cloned the OLRB database - the "Decisions" database - to contain the decisions from the other boards in Employment Standards, the Ontario Human Rights Commission, the Office of Arbitration, and the Ontario Public Service Tribunals. It is hoped that this will promote the concept of an automated database for all the Ministry's judicial decisions.

A proposal to market the MOLINDEX database is still in the hands of the Library Committee. In the interim, the Library has permitted certain

branches within the Ministry access to the database using their own equipment and passwords. The potential is there for greater exploitation of the database than is presently being done.

PART II: OLRB REPORTS DATABASE

BACKGROUND

The Ontario Labour Relations Board is an administrative tribunal which regulates certain aspects of the collective bargaining relationship. Over 1,000 decisions are issued each year on matters such as the certification of trade unions, unfair labour practices, unlawful strikes and lockouts, jurisdictional disputes and the arbitration of grievances in the construction industry. Approximately 30 of the most important of these decisions are published each month in the OLRB Reports. The staff of the Labour Board refer to these reported decisions frequently in order to maintain a consistent policy.

The necessity for quick and reliable access to precedent setting decisions of the Board resulted in the establishment of a card index. Each decision was indexed under the appropriate subject headings and the name of the company involved. As the volume of decisions increased the card index became extremely cumbersome. Producing the cards was a time consuming task and as a result the indexing was several years behind. The cards were constantly out-of-order since users removed them from the drawers and then misfiled them. The subject headings proved to be inadequate because certain headings like "certification" had been used for hundreds of decisions. While changes in the index terms were made to alleviate this problem it was found that no subject headings were able to adequately describe the unique circumstances of many of the Board's decisions.

The Board librarians was asked to investigate alternative methods of indexing the OLRB decisions. After a thorough examination of the whole system the only realistic answer was to automate the index. The Chairman of the Ontario Labour Relations Board was enthusiastic about the idea of a computerized index. He strongly urged that it be developed and supported the project in all aspects of its implementation.

The OLRB Library joined the Ministry's Research Library in trying to obtain funds for automation. Once permission to automate was obtained a number of database vendors were considered. The costs, the advantages and the disadvantages of each system were examined. The BASIS system produced by Infomart was selected as the best for the Ministry's purposes.

DEVELOPMENT

Once it was decided to automate, several meetings were held with Infomart to set up the basic file design of the database. During the same period an OLRB users committee consisting of two Vice-Chairmen, the Senior Solicitor, the Chief of Program Development and the OLRB Librarian met to discuss the needs of the users. The OLRB Librarian also met with the librarians from the Ministry Library.

It was decided that the OLRB database would be developed as a model for the indexing of all decisions issued by the Ministry. It was hoped that decisions from the Arbitration Board, the Ontario Human Rights Commission, the Occupational Health and Safety Division and the Employment Standards Branch could be automated using the same programming as that developed for the OLRB. So far, approval has not been forthcoming for these projects.

Once the basic design was completed several OLRB staff were trained to enter data via the computer terminal. Entering records online proved to be a slow and costly method of building the database. It was decided that the earlier decisions would be placed on MICOM discs and then transmitted in batches. This method proved to be faster and more cost effective.

Additional staff were also hired to do indexing. The Library staff did not have enough time to create all of the data that needed to be prepared for the computerized index.

It took over a year to produce the database. Planning began in April of 1982 and by the end of September 1983, a database of 6,000 records had been created and was being updated on a monthly basis. Delays in equipment delivery, staff shortages and staff changes slowed the building of the database.

The database now indexes all decisions published in the OLRB Reports from 1959 to the current year. It is maintained by a staff of three. It takes

forty to fifty man-hours to index and transmit the monthly decisions once they have arrived in the Library. In terms of actual time elapsed this is three to four weeks. The Library staff have other duties that must be performed and cannot spend all of their time working on the computer system.

Database clean-up and the indexing of certain fields is still being completed. It is doubtful whether the system will ever be entirely finished since new ideas are always being suggested by users. A database like this is constantly being refined and improved to meeting the changing needs of the users.

DESCRIPTION OF THE DATABASE

The database is not a full text system. It is an index with a number of access points all of which can be searched. The system allows searches by the parties named in the style of cause, by panel members name, by file number, by citation date, by any word in the summary, by subject heading and by statute section, regulation or form number. Cases and decisions considered by the OLRB decisions can also be located on the system. Information on cases that have been judicially reviewed or where judicial review is pending is also available on the system.

The summaries that appear on the database are written by the Board's Junior Solicitor. The rest of the material for the automated index is prepared by the Library staff and written or typed on work sheets. The information from these work sheets is then entered into the "queue file" where it remains until an update is run.

UPDATING

The database can be updated in two ways: online or by batch input. The online input is very easy and quick. Documents can be created or modified directly on the terminal and then sent to the "queue file" where they wait to be integrated into the system with the next update. This method is costly. It is great for quick corrections but expensive to use when adding new records or doing extensive editing.

When multiple records are being created the most cost effective way of in putting the data is to type them onto word processing discs.

The corrections can then be made to the disc and online time, which is expensive, is not being used. The contents of the disc are then transmitted in a batch using a word processor with communications ability.

Records can also be downloaded from the database onto discs. The corrections or additions can then be made using word processing equipment. Once the changes are made the information on the disc is transmitted in a batch to the "queue file".

ONLINE SEARCHING

The Ontario Labour Relations Board staff are encouraged to learn how to do online searching so that they can access the database whenever they need to do research. Some staff members have developed a great deal of expertise on the system but a lot more encouragement is needed in order to make maximum use of the index. New staff members are quite enthusiastic about the system and eager to use the computer. Eventually, all those who need to do research will be accessing the database on their own.

Training requires approximately two hours of each person's time. New users are taught that fields can be searched one at a time or in any combination. The field designation must appear in the search when accessing such information as the file number, panel member's names or statutes considered. A retrieval map has been developed for all keywords. This means that if no field designator appears then the keywords of the summaries, the subjects and supplementary terms will be searched.

The system also has the flexibility to sort the search in a variety of ways. The decisions can be arranged alphabetically by the party name. They can also be sorted in chronological or reverse chronological order by the decision date.

A training manual has been written which explains all of these things as well as the basic concepts of computer searching such as Boolean Logic and the meaning of terms like "record" and "field". Samples of searches are also provided. At the back of the manual is a series of questions which the learner must answer by doing searches on the database. The questions illustrate the different types of research problems which can be solved by doing a computer

search. A user's reference guide to the database has also been prepared. It is kept by the terminal at all times for user reference when they are online.

A further development which will make it easier to train users is the creation of Profiles. These will be especially helpful to those who are not computer literate or to those who access the system infrequently. A Profile will provide a guided search to help the researcher find the needed information. A series of questions are asked and the user only has to type in the answer. This means that the user does not have to learn the command language or remember how to structure a search.

One such Profile has already been developed. It helps the user to find decisions which consider sections of the Labour Relations Act. It is used frequently and researchers do seem to find this approach to doing a search quite helpful.

THESAURUS

Another enhancement to the system which will prove helpful to the researcher is the thesaurus. It will provide increased subject access to the materials indexed in the database.

Before the OLRB Reports index was automated a subject heading list had been compiled. It contained about 1,000 terms and cross references. This list ensured that the indexer consistently applied the appropriate headings and also helped the researcher to locate the terms needed to retrieve decisions.

In the automated index the summary can be searched and this creates another form of subject access. However, the controlled vocabulary provided by a standardized subject heading list is still required so that decisions are not missed when the researcher fails to think of all the synonyms or phrases that might have been used to describe a particular case.

The thesaurus provides a more sophisticated form of subject access than that available through the summaries or the subject heading list. It not only lists the terms used but it also indicates the relationship between words. By examining a subject heading you can determine if there is a broader term, a narrower term or a related heading. Scope notes and history notes also give information on how a term has been defined or used.

The other advantage of the thesaurus is that it refers the researcher from illegal headings to the established ones. In the online environment this means that whenever an illegal search term is used the thesaurus will automatically switch the searcher to the correct term and perform a successful search. This means that if you enter the phrase "unit size", which has not been used as an index term, then the computer will scan the thesaurus and determine that the appropriate heading is "bargaining unit size". The computer will then do a successful search on the term "bargaining unit size".

The printed version of thesaurus is also essential. It fills all the functions of the old subject heading list but provides even more information to those who are using it. By demonstrating the relationship between terms the users are able to select the appropriate headings far more easily. The integration of many illegal terms with references to the appropriate headings enables users to construct accurate searches before they even access the database.

MICROFICHE

One of the products of the database is a Comfiche (microfiche) version of the index. In many ways the fiche are a substitute for the old card system. They are essential because at this time the public has no access to the database and some form of index is necessary to enable them to locate relevant decisions.

The fiche can be searched by case name or subject. For each decision on the microfiche the following information appears: the case name, the file number, the panel members, the citation, the summary and the subject headings. Precedent setting cases which have been cited in more than three other OLRB decisions have an asterik appearing beside the case name so that users can identify them.

NAME AUTHORITY FILE

A name authority file for unions has also been created online. The form of union names changes so frequently that it is necessary to have some kind of authority list to maintain consistency when indexing party names.

All documents that were to be entered into the name authority file were assigned a record type designation which was different from that used for the decisions. The documents in the authority file are then located in the system by a search on the record type field.

Three fields were then created in the database to contain the union names. The first field contains the party name, the second the preferred party name and the third the variant party name. Each of these fields can be sorted alphabetically. The resultant lists can then be printed for use by the indexer.

CONCLUSION

The creation of a database does provide quick and reliable access to information that could never be retrieved with the use of a manual system. However, the computer is not a "magic" machine which is just sitting there waiting to unleash volumes of information. Management must be shown that while it can do marvellous things automation does not happen overnight. Creating a database is a very time consuming project. Management must be willing to provide adequate staff support and funds if a database is to be built and maintained.

The costs of creating a database can be high. The online time required to build it and the equipment necessary to access and maintain it are expensive. In the short run automation does not save money.

The staff needed to support a computer system also require specialized training. This means that when old staff leave the replacements must also receive the same specialized training.

Automation does solve many problems: however, it also creates others such as increased costs during the development period and the need for a more highly trained staff. Access to information is greatly improved but it does take a lot of effort to create a seemingly "effortless result".

The Introduction of an Automated Cataloguing System at the Ontario Ministry of Labour Library

Marian Dworaczek,
Assistant Head Librarian,
Ontario Ministry of Treasury and Economics

and by

Alison Macintosh,
Marketing Representative, UTLAS Inc.

ABSTRACT

In March, 1982, the Ontario Ministry of Labour Library signed on to the UTLAS' CATSS system to automate the Library's cataloguing functions. This paper deals with the process leading up to that decision, the CATSS system itself, and a brief review of what the cataloguing department has done with UTLAS since that date.

INTRODUCTION

The Ontario Ministry of Labour Library, established in 1949, is recognized as one of the best labour libraries in the world, particularly in the field of occupational health and safety. Operating from a main location in Toronto, with six satellite libraries in the Toronto area, the Library is maintained primarily as a source of information and research for the Ministry. Its resources, however, are made available to other government agencies, libraries, and the general public. Aside from both a quick and in-depth reference service, the Library offers specialized indexing, online computer searching, Library bulletins, and bibliographies.

The collection includes 60,000 monographs, 1,500 periodical titles, over 3,000 government reports, Canadian, American and international standards, and other serials in microform or hard copy. The subject content relates to the Ministry's areas of responsibility such as employment, human rights, labour relations, occupational health and safety, and environmental health. Special collections such as an historical collection of union constitutions and proceedings, and archival material on occupational health make this Library a unique resource both to use and to catalogue. The Library's acquisitions rate is approximately 4,000 items per annum.

In terms of staff, six librarians and ten paraprofessionals run the Library on a full-time basis. Of these, one librarian and one technician comprise the cataloguing unit of the technical services department.

Since 1977, the Library has undergone a tremendous increase in size. In that year, the Occupational Health and Safety Division (OHSD) was transferred from the Ministry of Health. As a result of this change, 4,000 monographs, 200 journal titles, and four Health Library staff (two librarians, two technicians) became part of the Labour Library.

The establishment of the OHSD had a severe impact on the Library, and in no small way created a need for an automated cataloguing system. Automation in the Ministry Library dates to 1975, when a study was undertaken of the commercial online databases then available for reference searching. The report outlined the expected benefits of online searching, and the projected costs. The end result was the allocation of the necessary funds for this new service.

Automated cataloguing, however, was not introduced to the Library until March, 1982, with the implementation of the UTLAS' CATSS system. (See section entitled "The System" for an overview of UTLAS and CATSS.) The decision-making process leading to the selection of CATSS began officially in 1977 and, over the next five years, included three consultants, numerous committees and reports, and much discussion. For the purposes of this study, that five year period will be divided into three time frames in the following section, "Choosing a Cataloguing System."

CHOOSING A CATALOGUING SYSTEM:

THE DECISION-MAKING PROCESS

PART I 1977-1978

The transfer to the Ministry of the Occupational Health and Safety Division (OHSD) meant major changes for the Library, and focused attention on the cataloguing system. With the addition of the Health Library's materials, there were now two card catalogues, and two journal index catalogues. The government documents in the Occupational Health collection were classified under a different system of call numbers than those used by Labour. Many of the Library's microfilms and microfiche required cataloguing, as did a donation of materials from the Mining Health and Safety Branch of the Ministry. All of the serials and annual reports transferred from the Ministry of Health required cataloguing. The Public Services staff were facing dramatically increased workloads from both Ministry and non-Ministry users. Given that increased staffing was not possible, the Library was faced with two basic options; one was to cut back on services, and the other to streamline Library operations using automated systems where money permitted.

By late 1978, the pressure on the Library and its staff was severe. In the previous 18 months, the OHSD staff had virtually doubled in size, with the demand for Library service increasing accordingly. With public interest in occupational health growing, several Ontario colleges and universities had begun educational programs in the subject that fall, and their students turned to the Ministry Library for documentary support.

Given all of these factors, in December 1978, a report was submitted to the Ministry by one of the Library's reference librarians outlining the problems and suggesting solutions. This report put the first real focus on automated cataloguing and indexing systems. Specifically, the report stated:

The reference workload is often now so great that other areas are neglected. Currently our cataloging and indexing takes far too long because the librarians cannot devote enough time to these procedures. If a more efficient system of cataloguing and indexing were devised then not only would backlogs in these areas be cleared but turn around time on reference requests would be improved.¹

The report went on to itemize the benefits of automation. By automating its cataloguing functions, the Library hoped to eliminate its cataloguing backlog and receive computer produced catalogue cards and microform versions of the catalogue for easy distribution to the satellite libraries. Automation was also expected to permit much better control over the collection, with future expansion available in the system for acquisitions and serials control functions. Cataloging was, however, to be only one part of the larger automated system. The report recommended that "A library systems analyst be hired immediately on contract to assist the librarians in designing and implementing an initial demonstration system this year,"² with initial automation limited to the indexing and cataloguing systems. Thus, the Library moved to its consultancy phase.

PART II FEBRUARY - AUGUST 1979

Based on the December, 1978 proposal, a formal request was made by the Library in January, 1979 to hire an analyst. The firm of Gellman, Hayward and Partners, Ltd. was hired to examine all Library operations. Their report was submitted in May, 1979, and included seven major recommendations, most calling for further detailed study. Many procedural and operational changes which they suggested, however, were implemented.

Given the Gellman, Hayward report, the Ministry hired Susan Klement of Information Resources in August, 1979 to examine the Library's service policy. She made several recommendations, and presented the options which the Library might follow. While both Ms. Klement's and the Gellman, Hayward reports are confidential, it can be said that both specifically recommended further investigation of automated cataloguing support systems. Thus, in September, 1979, UTLAS became a possibility.

PART III 1979-1982

In order to investigate such systems, the Ministry established an internal working committee, consisting of the head librarian, the head of technical services, and an analyst from the Systems and ADP Branch. The committee's mandate was to review the UTLAS and OCLC systems with respect to recommending implementation of one of these to replace the then current manual system.

In September, 1979, test searching was conducted on the UTLAS system, with the same search repeated on OCLC in October. 408 titles were searched on both systems. Of those titles, 192 or 47.06% were Labour related, with the remaining 216 or 52.94% dealing with occupational health and safety. The average overall "hit rate" for UTLAS was 52.57%, with OCLC at 62.35%. The Chart below shows the search results by type of collection and result.

FIGURE 1
1979 TEST RESULTS

	Labour	UTLAS OHS	Average	OCLC Labour	OHS	Average
Hit Rate %	58.85	46.29	52.57	64.06	60.65	62.35

The committee further reviewed each system with emphasis being given to their annual operating costs, available services, and their ability to manage increased demands in the future. Their final report was submitted to the Director of the Research Branch, under whose jurisdiction the Library fell, in February, 1980. Basically, the report recommended "...The acquisition of the UTLAS automated cataloguing system from the University of Toronto to replace the current inefficient and out-dated manual method of

cataloguing."³ The report went on to recommend the establishment of a permanent position of "Cataloguer", a role then filled by contract and the hiring of additional cataloguing staff until such time as the cataloguing backlog was cleared.

Beyond this, the report presented an analysis of why UTLAS had been chosen over OCLC (primarily a question of quality of service to a Canadian institution), and included detailed cost analyses of the manual and the UTLAS cataloguing systems. The results are shown in Appendix A and B.

Discussion was also given to the possibility of the conversion of the card catalogue to microfiche.

In terms of expected benefits, the study reiterated the earlier benefits mentioned, as well as sharing time and cost savings based on the UTLAS test results. An up-to-date database of catalogue information for the Library, and access to the records of more than 100 other libraries were also cited as important, tangible benefits of the UTLAS system. Intangible benefits were also considered, such as the provision of faster and more effective service to users, and an improvement in the Library work environment. The staff would be working with modern equipment and technology, giving them the opportunity to be more effective and efficient, thus improving staff morale. It was also noted that the Ministry could make an important contribution to a Canada-wide library network, and further advance automated cataloguing within the provincial government.

Unfortunately, due to changes within the Ministry, it was not until two years later that an internal committee of senior Ministry management approved the funds for the implementation of UTLAS. That committee did not, however, approve the recommended cataloguing staff. Between the 1980 report and the introduction of UTLAS, discussion continued with the committee reviewing the variety of submissions and reports that had been generated over the years before making their decision. As well as deciding to commit money for UTLAS, the committee also authorized funding of the Library's BASIS system, the latter being discussed in another essay in this collection.

In February, 1982, immediately before the agreement to use UTLAS, one final report was submitted. This one came from an internal library committee,

set up in late 1981, whose purpose was, once again, to investigate various library automated retrieval systems, including UTLAS. As part of their study, the group conducted a second test of UTLAS with an overall "hit rate" this time of 68.9%. The test involved the searching of new items in general, with some retrospective material. The specific results of that test are shown below.

FIGURE 2
1982 UTLAS TEST RESULTS

I. NEW BOOKS

1)	Sample size	135 titles
2)	Overall hit rate	68.9%
3)	Hit rate by type of publication:	
	a) Commercial	93.4%
	b) Institutions	40.6%
	c) Government	54.7%

II. RETROSPECTIVE SAMPLE

1)	Sample size	300 titles
2)	Overall hit rate	53.3%
3)	Hit rate by type of publication:	
	a) Commercial	84.4%
	b) Institutions	39.5%
	c) Government	48.3%
	i) Ontario	31.8%
	ii) Canada	65.6%
	iii) Provinces	80.0%
	iv) United States	38.2%
	v) Other	83.3%

Beyond cataloguing, automation of the acquisitions and serials management functions were discussed, with attention given to automating public service tasks such as circulation. The final recommendation of this committee was:

That the Ministry purchase a Hewlett Packard computer and the MINISIS software for cataloguing, ordering, periodical indexing and decisions indexing. Serials and circulation should be added as they become available. . . . The Ministry should sign the contract with UTLAS. Once a month the library should receive a computer tape with its new cataloguing records from UTLAS. These would be added to MINISIS.⁴

Thus, in what would prove to be the final report before the introduction of UTLAS, a slightly different role was being suggested for that utility in terms of the Library's needs. The committee was suggesting UTLAS primarily as a data source, rather than a full service provider for cataloguing needs.

In the final analysis, however, the UTLAS' CATSS system as a full cataloguing system was chosen, and an agreement was signed in March of 1982 between UTLAS and the Ministry. It is important to note that aside from the many formal reports over the years, Library staff input on automation was encouraged and considered. The staff were kept aware of developments as applicable and, perhaps, this factor more than any other has contributed to the Ministry's success with its automated systems use.

THE SYSTEM

CATSS, the Catalogue Support System, is the foundation from which UTLAS' products and services have grown. The system includes both bibliographic and authority records in MARC format numbering approximately 24 million in June, 1984. That total increases by 25,000 new records per week. Using CATSS, clients may search cataloguing copy, derive records for their own files, and contribute original cataloguing records to the database. Based on their records, they may then receive products such as shelf list cards, COM or book form catalogues of their collections, or magnetic tapes of their records. Clients who use the online labels facility of CATSS may also generate spine and/or book pocket labels in-house.

While it forms the major part of the UTLAS system, CATSS is but one part of the whole. UTLAS Inc. is a wholly-owned subsidiary of the University of Toronto, and functions in the library marketplace as a shared cataloguing bibliographic utility. Their role, however, extends beyond providing

cataloguing data to being a database builder and maintainer, and a producer of database by-products. The acronym UTLAS stands for "University of Toronto Library Automation Systems", and its online network dates to 1973. Until 1980, however, the emphasis was on building the database to support CATSS from which the other services could develop. In that year development work began on ACCORD, the acquisitions subsystem of CATSS. Marketing of ACCORD began in 1982, with an ever increasing number of users and book vendors signing on to the service since that time. REFCATSS, the public service version of CATSS, is also well used, particularly since UTLAS began offering an interlibrary loan facility through it in February, 1984.

Beyond these systems, UTLAS also has an agreement with Innovative Interface, Inc. of Berkeley, California, to market their INNOVACQ system in parts of Canada and the United States. INNOVACQ is a microcomputer-based fund accounting system, with the ability to generate related management reports. INNOVACQ interfaces with CATSS and ACCORD for integration of a library's cataloguing and acquisitions functions. In early 1984, UTLAS also signed a joint marketing agreement with CL Systems, Inc. of West Newton, Massachusetts. Under the terms of the agreement, UTLAS will help "open the door" to CLSI products and services in Canada, while CLSI gives UTLAS the same assistance in the United States. CLSI specialize in online catalogues and in-house circulation systems.

In June, 1984, UTLAS introduced InfoQUEST, its online public access catalogue aimed at small libraries or special collections. Currently accommodating files of up to 25,000 records in size, InfoQUEST permits online access by author, title, or subject, and runs on an IBM PC.

All of these services are offered to an ever growing network of client libraries. There are currently 250 member institutions, representing over 2,000 individual libraries who receive products or services from UTLAS. The largest customer base by library type are special libraries at 38% of all users. Every library type, however, is represented, with book vendors also using the system for ACCORD. As well as Canadian clients, libraries in the United States and Japan also belong to the network.

By late 1984, the UTLAS system will be operating from TANDEM

Computer hardware, dramatically increasing the system's present capacity. This change will permit even greater scope for development, and bring UTLAS "closer to its goal of automating the whole spectrum of library services."⁵

THE LIBRARY AND UTLAS SINCE 1982

Over two years have passed since UTLAS was introduced as the Ministry Library's automated cataloguing system. Since then, one further report has been prepared, studying the automation of the Library's serials management and acquisitions functions. Submitted in November, 1983, the report in part recommended the purchase of the UTLAS ACCORD system. Based on that recommendation, the Ministry added ACCORD to their CATSS system in April, 1984.

CATSS has proven a success. While a cataloguing backlog still exists, the Ministry has entered over 16,000 records as of June, 1984, into the UTLAS database. Aside from regular acquisitions, the Library has been working on a retrospective conversion project since July, 1983, to enter their pre-1982 collection into the database. From September, 1982 to June, 1983, hundreds of microforms were also catalogued on the system under another special project. Still to be completed is a retrospective conversion project focusing on U.S. government documents related to medicine, a historical collection of International Labour Office publications, and archival material on occupational health.

After initial training, the system was well received by the staff, and has helped keep costs down. The Library currently receives weekly shelf list cards, a monthly acquisitions list, and a quarterly cumulating microfiche catalogue.

The card catalogue, with its accompanying maintenance costs in man hours, was closed with the introduction of UTLAS. Eventually it will be discarded.

In general terms, two major suggestions might be made to other libraries considering automated systems. For one, there are definite advantages to bringing in outside consultants. Senior management tends to look at an outside consultant's report very differently from a report prepared internally. As

well, in cases such as service studies, users will certainly feel freer talking to an "outsider" rather than to a library staff member.

Secondly, and most importantly, staff input should be invited and seriously evaluated. An intangible benefit of automation can be improved staff morale, but only if it is a system which the staff accepts. Encouraging their input at the decision-making stage can help guarantee this acceptance, with an increase in productivity a likely result. Staff acceptance has helped to make the UTLAS' CATSS system a success at the Ontario Ministry of Labour Library. This success can be built upon in years to come, as new automated services are considered.

FOOTNOTES

¹"Re: A Proposal to Automate the Library." Memorandum from John Wilson, Librarian, to G. Swartz, Research Branch Director, December 18, 1978, p. 2.

²*Ibid.*, p. 3.

³"Study of Automated Cataloguing Requirements for the Ministry Library." An Internal Report Submitted by Ron Squires, February 1980, p. 2.

⁴"Ministry and OLRB Library Automation." An Internal Report Submitted by Douglas Armstrong, Head Librarian, 1982, p. 1.

⁵Wyley Powell, "Overview of UTLAS, Inc.", Toronto: UTLAS, 1984, p. 4.

APPENDIX A

Manual System of Cataloguing
(Staff Costs Only)

Position	Description of Activities	Weekly Time	Weekly Cost (\$)
Technician A	Checking of books in main catalogue	10 hrs.	63.60
Technician B	a) Online checking of books (i.e., Libcon, GPO)		
	b) Derived cataloguing	32 hrs.	243.84
	c) Original cataloguing		
	d) Proofreading and sorting cards		
Cataloguer	Original cataloguing	36 1/4 hrs.	365.58
Head of Technical Services	Checking of cataloguing	10 hrs.	110.50
Word Processing Operators	Production of cards and book processing	45 hrs.	254.25
All Technical Service Staff	Filing of cards	24 hrs.	151.92
All librarians	Revising of filing	18 hrs.	198.90
	TOTAL		1,388.29
Other costs (online searching, supplies, etc.)			100.00
	SUBTOTAL		1,488.29

APPENDIX B
Cataloguing With UTLAS
(Staff Costs Only)

Position	Description of Activities	Weekly Time	Weekly Cost (\$)
Technician A	Checking of books in main catalogue	2 hrs.	12.66
Technician B	a) Online checking of books		
	b) Derived cataloguing	32 hrs.	243.84
	c) Proofreading		
Cataloguer	Original cataloguing	34 hrs.	342.72
Head of Technical Services	Checking of cataloguing	2 hrs.	22.10
Terminal Operators	Inputting of cataloguing data on UTLAS	25 hrs.	141.25
All Technical Service Staff	Filing of cards*	16 hrs.	101.28
All librarians	Revising of filing*	18 hrs.	<u>198.90</u>
	TOTAL		1,062.75

*This will be eliminated with the use of COM catalogue.

ONTERIS: Development, Current Status and Future Possibilities

Ilze Purmalis,
ONTERIS,
Ontario Ministry of Education

DEVELOPMENT

ONTERIS, the Ontario Education Resources Information System, is an online bilingual bibliographic database of Ontario Education information. Currently, the database is produced and managed by the Computers in Education Centre, Ontario Ministry of Education.

ONTERIS was started nearly ten years ago as an initiative by the Ministry of Education to provide access to and wider dissemination of educational research reports produced in Ontario. Since the early 1970s the Ministry had been actively supporting research in education through contractual and grants-in-aid programs. By 1974, about two hundred reports had been issued as a result of these programs, but no catalogue or index provided access to them.

Similarly, many of the larger Ontario boards of education had recognized the importance of research for decision making and established research departments during the 1960s. In the Metropolitan Toronto area, the Metropolitan Education Research Committee (MERC), composed of the research directors of the eight area boards, was facing the problem of providing access to about four hundred reports produced by the research departments and was considering the production of a metro-wide bibliography to educational research.

Recognizing shared information needs and goals, the Ministry, on the basis of an earlier feasibility study, contracted the Metropolitan Toronto School Board to develop "...the first phase of a documentation system

consisting of a database of educational research conducted through the research programs of the Ministry of Education, conducted at the school board level and conducted by OISE; a system which would have bilingual capabilities and lend itself to computerization."¹

Because of her experience with both education information and educational research, Barbara Beardsley was selected as the principal investigator of the project. She guided the development of ONTERIS from the first contract granted on November 1, 1974, until ONTERIS was judged operational and was integrated in the Ministry of Education in June, 1980.

The immediate objective of the Onteris project was to produce a printed publication providing access to Ministry-funded research and research done by the Metropolitan Toronto area boards. Along with author and subject indexes, the publication was to contain informative abstracts of the reports to disseminate research results. The format of the abstracts was designed in collaboration with the researchers and is still used for ONTERIS records of research reports. An example of the ONTERIS abstract is included in Figure 1.

PRECIS, a computer-assisted indexing system developed by the British Library, was selected for producing the subject index because it allows multiple access points and the use of natural language and provides contextual subject statements for all entries. The PRECIS software was available through UTLAS, the University of Toronto Library Automation System.

In 1976, the feasibility of computerizing ONTERIS was explored by creating a sample online database using the ISIS software of the International Development Research Centre, installed at a computer service bureau in Ottawa. On the basis of that experiment, the Ministry decided to acquire and install at the Queen's Park Computer facility the CDS/ISIS OS version developed and supported by UNESCO at the Queen's Park Computer facility. While ONTERIS was a contract, systems support was provided by Janice Graham, a systems librarian on the project.

While the publication of printed products still remained a requirement, with the installation of ISIS the development of the online database became the focus of the project. From the beginning the database was searchable online in-house. By 1978, it was being searched also by librarians at the

Ontario Institute for Studies in Education, the Faculty of Education, University of Toronto, and the professional libraries of the Metropolitan Toronto area boards. These users provided valuable feedback on the design and contents of the database.

FIGURE 1

Sample ONTERIS Research Record from a BRS Printout

AN ON03016. 8405.

SF Research and Reports.

MT Research.

LG English.

TI The Primary Alternative School, 1982-83.

SERIES TITLE: Research report; 83-04.

AU PERSONAL AUTHOR: Watkin-Gwyneth-A; Bonyun-Rosemary-G.

PB Ottawa: Ottawa Board of Education, Research Centre.

57 p.

YR 1983.

DE ALTERNATIVE SCHOOLS. Primary schools.

Curriculum, administration and school-parent relationship.

Attitudes of parents.

Use of volunteers: Parents -- Study regions: Ottawa.

AB SAMPLE: 126 students (Ss) in the Primary Alternative School (PAS), kindergarten to grade 3; parents (Ps) of 92 Ss (77%); staff and directors. Data collected 1982-83.

METHODOLOGY: A self-made questionnaire was administered to Ps. Tables, means, percentages.

FINDINGS: 1. 54% of Ps felt that the PAS was fully meeting its objectives; 25% felt that objectives were partially met. 2. The benefits to Ss most frequently cited by Ps were an improved attitude to learning, and increased self-confidence, happiness, and social skills. 3. 84% of Ps indicated that the PAS was a suitable choice for their child at this stage. 4. 34% of Ps were satisfied with their amount of involvement as volunteers, while 40% wanted to participate more. 53% of Ps were satisfied with the nature of their participation. 5. The majority of suggestions for additional special services pertained to physical education, music, and French. 6. Of 92 Ps, 891 felt that the PAS should continue. A majority of Ps were completely or partially satisfied with P-staff communications.

CONCLUSIONS: 1. The PAS appears to be meeting Ss' needs and P expectations. The cooperative development of a working philosophy by administration, staff, and Ps is a high priority. 2. The role of P volunteers is highly important in the PAS and level of participation is high.

TE NOT INCLUDED: Self-made questionnaires.

AV MF from the Ontario Government Publications Services.

In 1977, as well, the coverage of the database was extended to include curriculum guidelines and resource materials issued by the Ministry and boards of education across the province. An archival database recording all the briefs, submissions, research, and reports of the Commission of Declining Enrolment in Schools was designed and developed at the same time. As the coverage of this database was extended to papers and reports of other provincial commissions and reviews of education, it became a component of the ONTERIS database.

A start was made on the development of the bilingual aspect of ONTERIS. The decision was made to provide records in the language of the documents, e.g., French records for French documents and English for English documents. Initially, all documents had English descriptors, but that policy has been changed to the entire record being in the language of the document.

In June 1980, ONTERIS ceased to be a research contract and was integrated in the Ministry of Education. Leadership during the critical transitional period was provided by Marjorie Mercer, co-ordinator of ONTERIS from June, 1980 - June, 1982.

During this period the coverage of the database was expanded to include publications of TVOntario, teachers' associations and other educational organizations. As well, information support was provided to the Secondary Education Review Project by entering the briefs, submissions and responses in the database and providing various printouts and searches to Project staff to assist in analysis of the material.

To test the efficiency of ISIS for the production of the database, a comparative study was done using BASIS at Infomart. The study confirmed ISIS to be the more effective production system, although BASIS had more sophisticated retrieval features.

Since the Queen's Park Computing Branch lacks the telecommunication facilities and accounting systems to provide search services to the public, by 1982, it was necessary to seek alternatives. Canadian vendors of search services were contacted first. However, none satisfied both the systems and distribution requirements at that time. Therefore, after some deliberations, Bibliographic Retrieval Services (BRS), an international company based in the

United States, was selected as the non-exclusive vendor of ONTERIS, because the service provides access to a large number of education and other social science databases, extends special services to educational institutions, and is widely distributed.

CURRENT STATUS

ONTERIS provides access to a wide range of education documents produced by public institutions or professional organizations in Ontario. Document types covered by the database include research reports; curriculum guidelines and resource materials; reports and papers including committee, task force, working group and commission reports; conference papers and proceedings; statistical analyses; policy statements, position papers and briefs; literature and research reviews and bibliographies. Excluded are annual reports of organizations, legal documents, theses and journal articles. Initially, journal articles were included if they described research not reported in monograph form. This policy was discontinued since the coverage was too unpredictable.

In general, the record structures and data description policies established during the developmental phase have been maintained. In the conversion of ONTERIS for retrieval of BRS, field or paragraph names were adjusted to match the most frequent usage by other education databases. Unfortunately, even in this small area standardization lags.

FIGURE 2

ONTERIS Record Structure on BRS

Label	Paragraph (Field) Name	Retrieval Characteristics
AN	Accession Number	Direct search; value parameters
up	Update Code	Value parameters
SF	Subfile	Free text
MT	Material Type	Free text
MS	Material Status	Free text
LG	Language	Free text
TI	Title	Free text
AU	Author	Precombined names
IN	Corporate Author	Free text
PB	Publication Information	Free text
SO	Journal	Free text
YR	Year	Direct search; value parameters
DE	Descriptors	Precombined terms; free text
EL	Education Level	Free text
AB	Abstract	Free text
SC	Special Features/Components	Free text
TE	Tests	Free text
GS	Geographic Source	Free text
FS	Funding Source	Free text
CP	Contract Person	Precombined names
AV	Availability	Print only

Personal and corporate authors and publishers are controlled by authority files. Controlled terminology is used in the following paragraphs: subfile, material type, material status, language, descriptors, education level, target population, and geographical source. Names of tests are controlled when possible.

When the publication of the printed subject index to educational research was discontinued because of economic constraints, the ONTERIS PRECIS file at UTLAS, from which the index was generated, was discontinued also. However, the descriptors on the online records are entered in a PRECIS-like contextual format to provide a concise subject statement. For an example, see the DE paragraph of the ONTERIS RESEARCH RECORD, Figure 1.

The ONTERIS database is still produced using CDS/ISIS 3.2 version at the Queen's Park Computing facility. The CDS/ISIS is a co-operative system with all ISIS users sharing any improvements made on the system. UNESCO assumes responsibility for the development and documentation of the system, as well as training and technical assistance. The software is available only to non-profit organizations or institutions. In Canada, the Ministry of Education and Commission de la sante et de la securite du travail du Quebec are the two ISIS users.

Recently, UNESCO released a new version, CDS/ISIS 4.4, based on the VSAM access method. The new software has greatly improved database management features, more sophisticated retrieval and print formatting capabilities and enhanced data entry and editing procedures. Installation of the 4.4 version is already underway in Quebec; the Ministry of Education is planning to start this fall.

Internal online searching of the ONTERIS database is done using ISIS at Queen's Park. The database accessible in-house is more extensive than the public one, including records of briefs and submissions to provincial commissions, which, though valuable for research, are not of interest to the general public. The in-house ONTERIS database has by now over 14,000 records. In addition, databases in developmental stages are accessible only internally.

FIGURE 3

Computer Environment of ONTERIS

OPERATING SYSTEM: IBM 370/3033
Queen's Park Computing Branch (QPCB)

ENVIRONMENTAL SYSTEM: C.I.C.S.
(QPCB)

SOFTWARE FOR ONTERIS: CDS/ISIS

ONTERIS

Bibliographic Database of Education Information

Commissions and
Projects SF

Curriculum
Subfile

Research &
Reports Subfile

CICS - Customer Information Computer Services

CDS - Computerized Documentation System

ISIS - Integrated Set of Information Systems

Since May 1983, Bibliographic Retrieval Services (BRS) has been providing public access to ONTERIS. To update the database, tapes of new records are sent to BRS three times a year; edit tapes are sent twice a year. Currently, the public database has over 7,000 records.

During the year that ONTERIS has been available through BRS, it has been gratifying to note increased use by boards of education and other Ontario educational institutions, as well as wide-spread use across Canada. International users have included institutes of scientific information in Mexico, the Australian National Library, and a substantial number of institutions and organizations in the United States.

Although formal publication of indexes derived from the database was discontinued, printout indexes to the curriculum microfiche are provided for the ONTERIS microfiche depositories. Furthermore, ONTERIS provides the master copies of the French and English subject indexes to the Ministry's memoranda, which are published by the Communications Services Branch.

With the introduction of a laser printer at the Queen's Park Computing Branch, the cost-effective derivation of quality printed products from the database is possible.

Most of the documents recorded in ONTERIS are "grey literature": those that are published are not widely distributed, and many are not formally published at all. To ensure that users of ONTERIS can locate the material recorded in the database, all documents for which reproduction release can be obtained are microfiched and made available for sale through the Ontario Government Publications Services or for reference at the ONTERIS microfiche depositories. If the document is available from its source, that information is entered in the availability field of the record.

To facilitate access to the documents within Ontario, ONTERIS microfiche depositories have been established at the Ministry's regional offices, the Ontario Institute for Studies in Education, and faculties of education across the province.

Besides the operational ONTERIS database, two others are being developed. LEMA, a database of Canadian learning materials for elementary and secondary education, contains at present records of special education

materials and records of exemplary educational software funded by the Ministry.

TERM, a thesaural database of the controlled vocabulary used in ONTERIS, is being developed to serve as an in-house indexing and searching tool. From TERM it will be possible to produce printed guides to the controlled vocabulary to assist the public searchers of ONTERIS. In the future, this database could be a contribution toward the development of a Canadian education thesaurus.

FUTURE POSSIBILITIES

The rapid changes in information technology make future predictions hazardous. However, in the immediate future two aspects will continue to receive attention: increasing the coverage of the database and providing wider access to the database. Alternative means of access need to be investigated, particularly for different client groups.

Another direction that might be explored in the future is information networks. Two possible networks in which ONTERIS could participate are a Canadian education information network and an Ontario government information network. The potential for both of these possibilities exists although economic constraints might delay development. ONTERIS is one piece of the jigsaw puzzle that at this time still describes the Canadian information scene.

FOOTNOTE

¹ONTERIS: Primary Development of a Documentation System for Educational Research. Contract between the Ministry of Education, Ontario and the Metropolitan Toronto School Board, November 1, 1974 - October 31, 1975.

The Introduction of UTLAS in the Ministry of Community and Social Services

Sandra Walsh,
Manager, Library Services,
Ontario Ministry of Community and Social Services

THE MINISTRY

The Ministry of Community and Social Services is a large, decentralized Ministry of 10,300 employees. With 270 offices across the province in the Northern, Southwestern, Southeastern and Central Regions including facilities for the developmentally and physically disabled, homes for the aged, centres for the protection and care of children, children's mental health centres, probation and after-care offices and vocational rehabilitation offices, there has been an increasing demand for centralized information and efficient retrieval.

THE HEAD OFFICE LIBRARY

The Library Services Section is currently a part of the Capital and Administrative Services Branch of the Finance and Administration Division. The Library was originally set up in 1968 and at that time reported to the Policy Branch. The collection, which is classified in the Library of Congress system, has grown steadily to its present size of 35,000 volumes with a periodical collection of 450. Approximately 3,000 new publications are added to the collection per year.

With a small staff of five - one professional librarian and four library technicians, the Library has had to cope with an increasing demand for information from Ministry and other clients from all areas of the province. The increased demand has been due in part to the excellent service

provided over the years. It has also been due to the fact that the manager has visited many areas of the province over the last two years. These visits to the regional and area offices and facilities to attend staff meetings and visit the twelve satellite libraries have proved to be helpful to library clients and the head office library staff.

The head office library staff also provides backup reference service and staff training to twelve satellite libraries in regional and area offices and in all facilities. Online literature searches and interlibrary loan service are also provided by the head office library, particularly in the cases where satellite library staff are not trained library technicians.

In addition to Ministry clients, the head office library has always had an "open door" policy to students, professionals such as social workers and psychologists, and to the general public. In the period August 1982 to May 1983, the Library answered a total of 10,563 reference questions, an increase of 2,274 or 27.4% over the same period for 1981/82. Reference statistics from August 1983 to May 1984 totalled 11,740. There has been a dramatic increase in requests from field offices: 1,056 in 1981/82, 2,508 in 1982/83 and 4,106 in 1983/84. Requests from facilities have also been high: 4,422 in 1981/82, 4,748 in 1982/83 and 4,297 to the end of May 1984. These increases have been due in part to visits by the manager to regional and area offices and to facilities over the past two years. Another significant area of increase in service has been to students, professionals and researchers. These have involved walk-in as well as telephone requests — approximately 75% of these being visits to the library in person. In 1982/83 there were 1,243 requests for reference assistance from this group — a 40% increase over requests in 1981/82. Requests to the end of May 1984 have totalled 1,234.

During 1982/83 the Library broadened its access to online information retrieval systems from one to five systems and completed 594 searches — a 22% increase over 1981/82. Requests to the end of May 1984 have totalled 643. Partially as a result of this, interlibrary loan requests were a high 2,562 in 1982/83 and 2,204 to the end of May 1984. Cataloguing of new Library publications increased to 2,391 in 1982/83 from 1,403 in 1981/82 — a 70% increase, and to the end of May 1984 totals 2,835.

DECISION TO AUTOMATE AND SELECTION OF A SYSTEM

The increasing work load, small staff and the time involved in maintaining a card catalogue, had reinforced the feelings of both the former and the present manager that automation had become a necessity. The University of Toronto Library Automation Systems (UTLAS) was the system of choice for the following reasons:

- the shared cataloguing available through CATSS, the cataloguing support system. The CATSS database includes source files from the Library of Congress, the National Libraries of Canada, France, the United Kingdom, Quebec and the National Library of Medicine. Cataloguing had been inconsistent over the years. By using CATSS the cataloguer could derive, edit or input cataloguing data in order to create a unique user file. The shared cataloguing would result in a reduced backlog of uncatalogued materials and allow the some 3,000 new publications added to the collection per year to be in circulation and accessible to Ministry and other clients immediately;
- a successful test account in January 1983, which resulted in a "hit rate" of 77%. The increase from an estimated "hit rate" provided by UTLAS in 1980 of 50% was due to the increasing number of subscribing libraries in the fields of health and social services;
- a weekly, monthly and quarterly cumulative paper printout of library holdings would provide a catalogue of library holdings to the head office library. The monthly subject printout would be mailed to Ministry and other clients throughout the province as a replacement for the manually produced list entitled CONSPECTUS to advise users of new acquisitions. The cumulative quarterly author/title and subject printouts would be sent to all the satellite libraries as a backup to and a complement to their collections; and
- increased efficiency in locating publications on interlibrary loan by using the REPCATSS module. With an average of 183 interlibrary loans per month in 1983/84, staff resources and time had become thinly stretched. Because of the large number of subscribers to UTLAS locations are found for a high percentage of interlibrary loans.

PROPOSAL TO MANAGEMENT

The first cost estimate was obtained from UTLAS by the former library manager in May 1980 (attached as Appendix A). In January 1982, a report was submitted to the Director of Capital and Administrative Services entitled Benefits of Conversion of Library Services to UTLAS for consideration and approval. It pointed out the importance of providing a comprehensive library service to all Ministry locations in keeping with the Ministry's policy of decentralizing its services. The report detailed the benefits of the CATSS cataloguing support system over a manual cataloguing system, the name and subject authority control system, the monthly book catalogue to be used as an acquisitions list and the quarterly book catalogue to be sent to facility libraries. Cost comparisons were attached comparing the non-recurring, ongoing and retrospective costs in subscribing to UTLAS to manual procedures. These cost comparisons favoured using an automated system instead of continuing the manual cataloguing system.

There was no decision made by management at that time since the library manager had gone on a secondment in May 1981 and other priorities arose.

The new library manager joined the Ministry in August 1982 and in November requested a revised cost estimate from UTLAS (attached as Appendix B). It is interesting to note the increases from those contained in the original cost estimate of May 1980: one time, non-recurring costs such as training, product set up and equipment installation (if required) from a total of \$2,250, in May 1980 to a total of \$3,059, in November 1982 — an increase of \$809 or 35.9%; ongoing annual costs such as Communications, Online services (CATSS), searching, displaying and deriving, record processing, data storage and security, new acquisitions lists, COM and book catalogues from a total in 1980 of \$8,857 to a total of \$12,527 in 1982, an increase of \$3,670 or 41.4%.

TEST ACCOUNT

A test account was arranged by UTLAS for a week in January 1983. The cataloguer put together a representative sample of 200 titles consisting of a mix of newer and older titles and a variety of books, reports, government

documents, monographs, series, microfiche and cassettes. The "hit rate" of 77% was of course very encouraging to the Library staff.

PROPOSAL TO MANAGEMENT

In February 1983, the library manager formally recommended to the Director of the Capital and Administrative Services Branch that the Ministry Library join the UTLAS online user network and requested operating funds for this purpose for the budget years 1983/84, 1984/85 and 1985/86 from the Finance and Administrative Division. The cost estimate was attached and the following points were stressed:

- that the trial account was highly successful with a 77% "hit rate";
- that at that time four other (now six other) Ontario government libraries were subscribers to UTLAS and that three others were seriously considering becoming subscribers. A consortium of Ontario government libraries would then be formed to obtain lower basic file maintenance rates and to obtain other benefits and enhancements to the system;
- that at this time of high technology, library automation is an essential step and that a library not planning to automate will very quickly fall behind in the services it can offer its clients, the efficiency and education of its staff, and its importance in the overall structure of its parent organization;
- that the benefits to the Ministry would include a system that enables libraries to maintain their flexibility as individual institutions while sharing those functions that can be sensibly shared; accurate detailed automated cataloguing which would replace time-consuming manual procedures and be the basis of an effective, dynamic reference service by using CATSS the cataloguer could derive, edit or input cataloguing data to create the Ministry's own unique file; and
- that the Ministry library has an established reputation for an excellent core collection and efficient service. Because of this demand for service had greatly increased. If the library is to continue to publicize its services, the staff would have to be prepared to meet the demand for information.

APPROVAL OF THE PROPOSAL AND SIGNING OF THE CONTRACT

Approval for funds was given in June 1983. The contract between the Ministry and UTLAS was signed in September 1983.

IMPLEMENTATION AND BENEFITS OF THE SYSTEM

In September 1983, the cataloguer began to enter new Ministry records onto the UTLAS system. From that date to May 1984, 1,322 records have been input — 800 new entries and 522 retrospective entries. These compare to manual cataloguing statistics for the period September 1982 to May 1983 of 899. Because the Library had been understaffed for that period, only one Library Technician 3 has been doing all the inputting up to June 1984. Starting in June, two Library Technician 3's will be entering material and there will be more time for in-house retrospective cataloguing. The staff also hopes to be able to hire technicians on contract through Canada-Ontario Manpower COED project for further assistance.

The staff is currently doing an extensive weeding of the collection in preparation for more extensive retrospective cataloguing and will be trained in the use of the online subject and name authority control in June 1984.

INTERLIBRARY LOANS

A very important bonus of subscribing to the UTLAS system has been the ease and efficiency of locating publications on interlibrary loan. With an average of 181 interlibrary loans per month to locate for Ministry clients, the reference technician had been spending approximately thirty-two hours or one full day per week locating publications by telephoning other libraries with all the delays involved in this process. Since starting to use UTLAS this time has been reduced to approximately eight hours per month. Efficiency of service to clients has been greatly increased. The Reference Services Supervisor was trained in June 1984 to use the REFCATSS Public Service Support System including the electronic transmission of interlibrary loan requests. This will, of course, further reduce the time involved in arranging interlibrary loans as more and more subscribers use the interlibrary loan facility.

PRODUCTS

Since it is essential to provide the satellite libraries in facilities and area offices with up-to-date information on the head office library holdings, a decision was made to have a paper rather than a microfiche catalogue. This decision has proven to be beneficial to the Library staff, to the Ministry staff in head office and to Ministry clients throughout the province. An intermediate level of cataloguing was selected. A weekly cumulative title list is a useful quick finding tool for the Library staff. The monthly subject printout is mailed to some 315 Ministry clients and other Ontario government libraries as the CONSPECTUS listing of new library acquisitions. Response from clients has been very favourable especially to the multi-subject access. The quarterly subject and author/title cumulations have been mailed to the staff of the twelve facility libraries. Favourable feedback has been received from them as they have been better able to provide efficient reference service to their clients by becoming more aware of head office holdings. A decision was made to have a shelf list section in the catalogue rather than single shelf list cards, based on the workflow process. The overall cost difference was not substantial -- approximately \$900 for the cards (excluding a one time set-up charge of \$370) and \$660 for the catalogue section. A copy of the comparative estimate is attached as Appendix C.

UTLAS USER GROUP

An UTLAS User Group was started in November 1983, with a view to exchanging advice and experiences. Further benefits would include better prices for basic file maintenance and possibly the sharing of costs of total user group records. The group would act as a pressure group, and the UTLAS marketing representative would be able to make formal presentations to the group as a whole. Special training sessions could also be given to the group from time to time. When the group started there were five Ontario government libraries subscribing with three others considering subscriptions. Since then, two have signed contracts and another hopes to do so in the next few months.

Three meetings of the user group have been held. Information has been exchanged on such topics of concern as retrospective cataloguing, handling

cataloguing backlogs, subject analytics and the various UTLAS modules such as REFCATSS, ACCORD, INNOVACQ and RECON. Because there are currently seven subscribers, the annual cost of basic file maintenance has decreased. The cost for the Ministry of Community and Social Services has been reduced from \$3,500 to \$1,050 for the fiscal year 1984/85.

COMPUTER LITERACY AND EDUCATION OF LIBRARY STAFF

A less tangible but no less real benefit of subscribing to the UTLAS system has been the opportunity for the Library staff members to become more familiar and comfortable with library automation procedures. This has been evident at all staff levels and has engendered enthusiasm and a sense of accomplishment.

CONCLUSION

When the final approval was given by the management of the Ministry to the signing of a contract with the University of Toronto Library Automation Systems in June 1983, it had been approximately three years since May 1980 when the former library manager had first introduced the idea to management. During 1982 and 1983 the climate for automation within the Ministry was particularly favourable. A Management Information Systems Steering Committee was set up to promote and monitor automation processes throughout the Ministry. This, combined with the consistent documentation in the form of statistics and reports by the library manager, and the strong support by Ministry management for library services, has allowed for the successful implementation of library automation.

APPENDIX A

Summary

A. One-time cost

1.	Training and set up	1,100.00	
2.	Product set up	1,000.00	
3.	Equipment installation*	<u>150.00</u>	
			\$2,250.00

B. Ongoing (Year 1)

1.	Connect time	2,250.00	
2.	Data security and storage	2,620.00	
3.	Searching and derivation	1,242.00	
4.	Communications	4,580.00	572.00
5.	Products:		
	acquisitions list	192.00	
	cards	555.00	
	book catalogue	1,426.00	
		<u>2,173.00</u>	
	TOTAL	<u>\$12,865.00</u> ¹	<u>\$8,857.00</u> ²

C. Ongoing (retrospective conversion)

1.	Online, storage, etc.	27,181.00	
2.	Additional cost for book catalogue	<u>3,666.00</u>	
			\$30,847.00

*If required

¹Total including renting of all communications equipment

²Total with own terminal; port charges only

APPENDIX B

UTLAS Cost Estimate - Ontario Community and Social Services

82/10/29

Summary Page

	<u>Recurring</u>	<u>Non-recurring</u>
File set-up & hardwire installation		2,050.00
Communications	877.76	
Online services (CATSS)	2,988.00	
Searching, displaying, deriving	2,116.80	
Record processing	1,116.00	
Data storage and security	3,353.84	
Products:		
Set-up costs		1,009.00
New acquisitions list	362.28	
COM and Book catalogues	1,713.10	
 TOTAL non-recurring costs		 \$3,059.00
 TOTAL yearly recurring costs	 \$12,527.78	

Total yearly recurring costs \$12,527.78 - 3,600

New records = \$3.47

Cost to catalogue 3,600 new records = \$3.47 per record

APPENDIX C

Community and Social Services Comparative Estimate

I. Single Shelf List Cards (1 year cost)

A) Set-up (one-time, programming and sample)	370.00
B) Production Cycle Charge (\$11 x 52)	572.00
C) Per Card (3,000 records x 1.5 cards x .075)	<u>337.50</u>
	\$1,279.50

The total first year cost excluding set-up would be \$909.50. To project forward, UTLAS has increased the Schedule of Charges at a lower rate than the annual inflation rate of the C.P.I. for the last ten years.

II. Book Catalogue (Shelf List Section)

A) Set-up (additional charge for extra section)	120.00
B) Run Charges (quarterly cumulations):	
*Additional entries	360.00
*Pages printed	<u>180.00</u>
(3,000 full entries, 10 entries per page, single copy)	
	\$660.00

The total first year cost excluding set-up would be \$540.00

*Only these two items would be affected by the addition of the self-list section

Automation comes to the Ontario Police Commission Library

**J. Mark Merryweather,
Librarian, Ontario Police Commission**

Government libraries differ from each other in many respects but they all have the same basic function, which is to aid the parent ministry in carrying out its objectives. The library contributes to the realization of these objectives and supports the total program by acquiring and making available, the books, materials and services which are required by various departments.

One of the ways libraries are becoming more efficient in their operation is with the use of microcomputers. Microcomputers are small and affordable and can be used for cataloguing, acquisitions, indexing, records management, etcetera. One microcomputer can be a multi-user operation with several terminals and printers attached to it, or it can simply be a one-man operation, depending on the model purchased.

The library I run is part of the Technical Services Branch of the Ontario Police Commission. We have two microcomputers on our floor. One is used by our secretarial pool with six terminals and two printers attached to it. The other is in our Library with one printer and one terminal attached.

When the Library was established in December, 1981 the first objective was to get the books, periodicals and reports which had accumulated in offices and on desks, into a room designated as the Library, and then to set about putting them into a logical sequence. This was done using a simplified alpha-numeric classification scheme which then enabled the staff to find their material quickly and easily.

As is often the case with a new library its collection suddenly started to grow, especially in the area of police studies. As more and more police forces found out about the new service, they began to contribute their own reports to the collection. These reports were catalogued on cards by author, title, and

subject. Some reports and monographs had more than ten subject index cards which made cataloguing time consuming, especially for a one-man library.

By the end of September, 1982 the Technical Services Branch had decided to upgrade its single MICOM word processor and purchase a multi-user microcomputer, which could be used not only by the secretaries but by other staff members for their various projects.

Fortunately, we are in a Branch of the Ministry of the Solicitor General, whose function is to provide all types of technological advice with respect to radio communications, data processing and computer system development to the province's 127 police forces. So we were in experienced hands when it came to choosing a microcomputer and related software packages.

The system which was eventually chosen and installed, was an ARISIA Microsystem with a hard disk and floppy disk capabilities. The hard disk is capable of storing twenty million, and the floppy one million characters of data.

When I asked the technical analyst responsible for making the decision why he had rejected IBM and APPLE and gone for an unknown like ARISIA, he explained that although the name might be unknown to the general public, ARISIA is well respected by its users. Its product has a good track record for reliability and its personnel are considered highly competent. Another major factor of course was price. The equivalent IBM system costs three times the amount.

What we ended up with has a CP/M - 80 operating system. An operating system is the program which controls the computer. CP/M (which means "control program for microprocessors") has the ability to run all kinds of software and has superior development tools, so, if necessary, you can write your own software. Software costs are also lower.

ARISIA's high performance in its word processing capabilities was also a big selling point. It could do everything the others could do faster, more reliably, and at less cost. WORDSTAR was the word processing software package chosen for the secretaries.

After four months of operating the new system by the Program Development staff and secretaries, it was decided a second ARISIA with a

double floppy disk drive would be purchased for the library. My supervisor requested I send him a memorandum outlining what a library software package should contain.

In my memorandum I requested that the package have the ability to sort, file, select logic relations, work with a large number of records and be able to generate reports.

The software selected for the Library was DBASE II. It was considered flexible enough for cataloguing and indexing and had the ability to generate reports. It also had a good reputation for performance and reliability and was well suited for list making. This as well as its adequate storage capacity and fast searching ability made it one of the most complete software packages available for our purposes.

When initially testing the DBASE II package, the first thing I appreciated was the ease in which one could set up fields for records, immediately store them, and instantly call them up.

I was advised that it would be best for storage purposes and convenience if the record length was kept below 90 characters. It would be possible to get a maximum number of entries on a floppy disk and they would be faster to sort and index.

I decided to divide the catalogue fields in this way:

Call Number	-	9 characters
Title	-	48 characters
Author	-	20 characters
Subject Code	-	6 characters
Page or Flag	-	4 characters

I then divided the subject index this way:

Subject	-	24 characters
Subject Code	-	6 characters

The Call Number presented no problems as every monograph in the Library has nine characters. The Title proved to be the most difficult of all my fields, because many titles are more than 48 characters in length. What I've had to do is condense some, leaving the key words in the title intact. The Author field is usually reduced to the first author if there is more than one.

Police forces are identified by name only, rather than having the words police force or police department added. The Subject Code and Page or Flagged items are straight forward and I've experienced no problems with their length. Sometimes the Subject category terms have had to be reduced, but no major modification has been required.

Once it was decided the data base was going to be set up separately for a catalogue and subject index, the task of assembling all the monographs and articles together and inputting them into the microcomputer came next.

After the first 1,000 items were catalogued, a photocopied printout was sent from the Chairman of the Police Commission to all the Ontario Police Chiefs. This package was divided into two parts. The first section contained a listing of subjects and their subject codes; the second, subject codes, titles and authors.

The printout was divided into major subject areas which ran from A to Z. Each subject was assigned a subject code, and the Chiefs were given a detailed explanation on how to use the catalogue and index. This service was something absolutely new for the police forces. A central library designed specifically for them, with an emphasis on police studies which other forces had conducted. What made it particularly useful was that they each had a hard copy of the catalogue in report form, and could flip through it at their leisure — thanks to DBASE II and the ARISA.

The catalogue and index in report form took ten minutes each to design, and less than 15 minutes to printout a 9 page index and 24 page catalogue which included author, title, and subject code.

This printout suddenly put the Library on the map and requests started to pour in. Several articles also appeared in the OPC Newsletter encouraging police forces to use the new information source now at their disposal. Library use by police forces increased ten times immediately, and continues to grow steadily.

Six months later I sent out a second catalogue with 1,000 more entries. In this printout, I decided to improve it by including the year each report was done. In this way the Police Chiefs could see at a glance which study was the most recent.

I find DBASE II especially good when I can't recall an author's name or the title of a particular book or article. If, for example, I remember the author has the letter "z" in his surname, I can ask DBASE II to display all the authors with "z" in their names and it does so immediately. Or if I want to know for example what studies the OPC has done on information systems, I use Boolean commands such as "or" and "and" so that it will find the data where both statements are true.

Of course, the biggest saving all is "time". A lot more cataloguing can be produced in less time with better results. It is also easy to cross index subjects and retrieve information requested. The other attractive feature is that the Police Chiefs now have a current catalogue.

Librarians often ask if I would recommend DBASE II, and if it is expensive to have a microcomputer set-up similar to the one in the OPC Library. I answer them by saying DBASE II recommends itself. It's easy to use, easy to design, and is a good building block for our library operation at the Police Commission. DBASE II can also be used for any type of list making or record management system, and reports are easy to design and run-off.

At this moment we have approximately 3,000 items catalogued and DBASE II sorts through this amount speedily. In an eight inch floppy with our field size we should be able to get between five and six thousand records on one disk. When all of this information is eventually transferred to a hard disk drive, we will be able to store between twenty and thirty thousand records, more than adequate storage for our long term needs.

The current cost of the OPC Library system is approximately as follows:

DBASE II software	700.00
ARISIA Microsystem (double floppy)	4,500.00
CYBERNEX APL-100 Terminal	1,400.00
STAR Gemini-15x printer (wide)	<u>650.00</u>
TOTAL	\$7,250.00

Maintenance fees run from 1 to 1.5% of the capital cost per month. An equivalent terminal without APL capabilities would cost \$1,000 and a similar printer which just takes only eight and a half inch wide paper would be \$400.

I feel fortunate to be part of the Ontario Police Commission Technical Services Branch, which had the foresight to include a micro in the new Library. Getting a microcomputer is one of the best investments a librarian can make to improve library service. For less than \$7,000 we were able to get a top notch package which has paid for itself in the time and effort saved doing routine matters. You can store as much information as you want on a multitude of disks, and with the software available can do almost anything without the user needing a computer science background or a manual several inches thick. I'm hooked on my micro, and can only suggest if you don't have one in your library - budget for it! The future is here, and the microcomputer is the tool for today's librarian.

The Ontario Government Librarians' Council 1970-1984

Brian H. Morrison,
Reference Librarian, Ontario Ministry of Labour

The history of the Ontario Government Librarians' Council (OGLC) might well be described as a very successful effort in fostering a sense of community among a group of librarians within a large and complex organization — the Government of Ontario. There are now sixty-four libraries and/or information centres listed in the current edition of the Directory of Libraries and Resource Centres in the Government of Ontario.¹ With a combined staff of more than one hundred individuals, these libraries serve the principal ministries and agencies of the provincial government, educational and cultural institutions, hospitals, correctional institutions and research centres. They provide information services not only to government employees, but also, in many cases, to the general public.

Prior to the advent of the OGLC, these libraries functioned basically as isolated units. There was very little organized communication among them. Indeed, librarians in one library might be totally unfamiliar with the staff and services of another library just a block away. There were few channels available to the government librarians to share information or to seek closer cooperation. A sense of community among the libraries was totally lacking.

Two events in the late 1960s coincided to bring about a change in this situation. In October of 1968, the Minister of Revenue, the Hon. John White, and the Provincial Secretary, the Hon. Robert Welch, along with their deputy ministers, Keith Reynolds and Ian Macdonald, began discussions on ways to improve library services. They decided to initiate a survey of existing government library services with a view toward more centralization. This survey was carried out between May, 1969 and January, 1970 by the Organizations and Methods Service of Treasury Board. Their report revealed

very little overlap or inefficiency and did not recommend physical consolidation of libraries. However, the report did urge more coordination in the development of library services.

Meanwhile, Jean Kerfoot, the Legislative Librarian, was moving on her own to break down the feeling of isolation among government librarians. It was the practice at the time for newly hired librarians in the various ministries to visit the Legislative Library. They came seeking advice and information on how the Legislative Library could back up the services of the smaller ministry libraries. In talking individually to the ministry librarians, Jean Kerfoot saw a need for more dialogue and sharing among the libraries as a whole. She felt that joint meetings of librarians from the various ministries would be helpful in relieving the sense of isolation. Such meetings would also be useful forums in which to share information, hear guest speakers and tackle problems of mutual interest and concern. To this end, an invitation was sent out to all government librarians on November 20th, 1968, asking them to attend an informal evening meeting in the Legislative Library the following month. "The purpose of the evening," read the invitation, "is simply that we have an opportunity to get acquainted with each other and learn something of the other libraries."

This first meeting was greeted with a positive response from those attending. As a result, more informal meetings were planned on a regular basis hosted by Jean Kerfoot and her staff at the Legislative Library.

Over a year later, at a meeting on May 6th, 1970, the twenty librarians in attendance were discussing a report dealing with the right of government libraries to initiate purchases of their own materials. This right, it was hoped, would eliminate the delays which many libraries were experiencing in ordering books. The question arose as to how the recommendations contained in the report might be put into practice. Barbara Weatherhead, librarian at the Ministry of Municipal Affairs, moved "...that an organization be formed for the purpose of co-operation, co-ordination and advice among the staff of the Ontario Government libraries and that a temporary committee of five members be appointed to draw up such by-laws and constitutions as are necessary for the operation of this organization. . . ." A committee of five was

appointed to carry out this motion — Jean Kerfoot, Barbara Weatherhead, Tom Anderson (librarian at the Ministry of Correctional Services), Rosemary Wolfe (librarian at the Ministry of Education) and Eileen Hay (Legislative Library).

Therefore, by the Spring of 1970, there was interest both at the ministerial level and among the individual librarians in a method that would bring about more cooperation among government libraries. The formation of a committee or council of head librarians was clearly the choice of the individual libraries. There was precedent for such an organization: The Deputy Ministers' Council already existed as an example of an organization designed to facilitate cooperation among ministries and services.

The librarians, through Jean Kerfoot, sought the help of Mr. R.W. Warren, Deputy Minister of the Provincial Secretary and Citizenship. A draft constitution for a librarians' council was presented, through Mr. Warren, to a meeting of the Deputy Ministers' Council on June 12th, 1970. In its letter to the deputy ministers, the committee outlined the benefits of a council of provincial government librarians. Such a council would serve to break down the isolation between libraries and provide a forum in which librarians could exchange information and share pooled expertise. The council would be able to study and make recommendations on important issues affecting library services. Government ministries would benefit from better informed librarians, shared resources and expertise and joint bibliographic projects.

The Deputy Ministers' Council approved the idea of creating such a council and accepted the draft constitution. On June 17th, the government librarians also gave their approval to the constitution. A week later, on June 25th, the Provincial Secretary, the Hon. Robert Welch, submitted an Order-in-Council to the Provincial Cabinet. The Order-in-Council (OC 2905/70) called for the creation of an Ontario Government Librarians' Council, the aim of which was "to provide a degree of co-ordination between various government libraries, a forum to foster the exchange of information and the improvement of library management in the Public Service. . ." The OGLC would consist of the heads of the ministry libraries or other persons as appointed by the deputy minister of the ministry concerned. This Order-in-Council was approved on September 20th, 1970.

The first organizational meeting of the OGLC was held on November 24th, 1970. Jean Kerfoot was appointed as first chairman, Tom Anderson was vice-chairman and Barbara Weatherhead as secretary. The remainder of the Executive Committee consisted of Marion Duncan, Ministry of Labour Library, Iris Mason, Ministry of University Affairs Library, Dean Tudor, Ministry of Revenue Library and Jean Burness, Ministry of Health Library.²

Since 1970, the OGLC has been active in fulfilling those aims it set out to achieve. While it is impossible within the scope of this essay to detail all the work of the Council over the past fourteen years, some of the highlights can be touched upon here. These achievements will show the extent to which the Council has been able to build a community of feeling among Ontario Government libraries.

The Council itself, consisting of all the head librarians, immediately became a forum for the regular exchange of information and ideas. A newsletter had been created in January, 1970, even before the formation of the Council, as a means to foster communication between libraries. Edited by Dean Tudor, OGLE³ was designed to be an informal publication for the exchange of information. Over the years, it has carried information about individual libraries, staff changes, OGLC business and projects, educational and professional development opportunities, publications for sale or exchange and current events.

A unique promotional effort was undertaken in the Fall of 1971 during the annual Canadian National Exhibition. The OGLC set up a "C.N.E. Enquiry and Study Centre" in the Ontario Government Building to explain the role and services of Ontario Government libraries. It was hoped that this effort would acquaint the general public with the role of government libraries as information centres. It was also hoped that individual libraries might subsequently hold "open house days" on a regular basis. This would allow other librarians as well as users an opportunity to learn more about each library.

From the beginning the OGLC has promoted bibliographic projects to encourage the exchange of information about library holdings and policies, to promote better access to Ontario Government publications and to improve access to government libraries by outside users. In 1971, the Register

Committee compiled the first list of government libraries and resource centres. Now in its third edition, the Directory is a useful guide to Ontario Government libraries, their holdings and services.⁴

In 1975, the OGLC published the first edition of the Union List of Serials in Ontario Government Libraries.⁵ This was based on three years of work and proved to be a valuable aid to interlibrary loans. Another effort at resource sharing was the Reference Sources in Libraries and Resource Centres in the Government of Ontario published in 1978.⁶ This publication listed major reference works of a general or specialized nature held by the various libraries.

One of the early concerns of the OGLC was access to Ontario Government publications. On March 10th, 1971, the Council presented a brief to the Queen's Printer of Ontario that urged better access by libraries to the publications of the Government of Ontario. It called for a monthly checklist of new publications, annual catalogues, more retrospective bibliographies and the establishment of a depository system. All these recommendations were subsequently implemented.

In the area of library coordination, the Council has worked to improve interlibrary loans, including the development of an interministry ILL form. Likewise, the Council developed a standardized online literature search request form. The Council has sponsored the exchange of professional periodicals in librarianship so that librarians could see a wide range of professional literature in their field. Information on databases available in the various libraries has also been shared on a regular basis. In 1972, after many years of work, the Council secured adoption of new purchasing rules which allowed libraries to handle the purchasing of their own resources. This speeded up the acquisitions process and allowed libraries to respond faster to user requests.

In 1979, an Ad Hoc Committee was set up to look into library cataloguing. It was hoped that some degree of uniformity and shared cataloguing might be achieved through the use of a common automated cataloguing system. However, after two years of study, the Committee could find no common consensus in favour of a cooperative system. As a result,

various libraries have adopted different automated systems. There has been some regret that the Ontario Government libraries have not been able to adopt a shared system similar to DOBIS presently in use at the federal level.

Another aim of the OGLC has been to improve the level of professionalism in the library service. One of the aims of Jean Kerfoot, through those early meetings at the Legislative Library, was to begin a "continuing education" process for government librarians by inviting guest speakers, sharing information and organizing tours of other libraries. Over the past fourteen years, the OGLC has sponsored a very active continuing education program for library staff at all levels. Very quickly after its formation, the Council asked the Civil Service Commission to offer a course in "Management for Ontario Government Librarians". The course was first held in February, 1972, and nineteen librarians and library technicians attended. The reviews were quite favourable and the course was offered again in 1975.⁷ Other courses, seminars and workshops, over the years, have covered everything from communications and marketing to automation and stress control. These courses have been important not only in the improvement of staff skills and professionalism but also in bringing government librarians together to discuss and share ideas and expertise.

A third aim of the Council has been to speak for the library community within the Ontario Government on issues affecting it. Indeed, the very idea of having a librarians' council grew out of a response to a government study advocating more coordination. Ironically, this role was to be tested quite quickly by another government report on libraries. In March, 1972, the Council received copies of a study undertaken by the Management Services Division of the Ontario Treasury Board entitled Government Library Services: Opportunities for Consolidation. Up to this point, the existence of this report had been unknown to the OGLC and its receipt came as a surprise. Among other things, the report recommended the consolidation of book and periodical acquisitions and the centralization of cataloguing. The OGLC reacted quite negatively to this report and decided to undertake its own study of library services. Five subcommittees were formed to review each of the following areas: services and users, technical services, physical space, staffing

requirements, and administration and budget. A 40-page report was tabled on February 6th, 1973, entitled Library Services in the Ontario Government: Today and Tomorrow. In this report, the OGLC provided a blueprint for library organization, services and staffing. It recommended against consolidating acquisition and cataloguing services, but made several other recommendations on library staff requirements, on budgeting and administration, on physical space requirements for libraries and on the role of the librarian in determining issues affecting libraries. The report was a positive statement on the role of the OGLC as the voice of librarians within the government. "Libraries have unique problems, many of which would not be apparent to anyone unfamiliar with this particular field. However, librarians, through their professional training, are in a position to offer sound advice on this subject." (p. 8) To help foster future coordination, the OGLC did endorse a government proposal for the creation of an Office of Library Coordination whose role was to "...develop standards and evaluation procedures for library performance and support. . .[and] to draft class specifications for the librarian and library technician series. . ." (p. 20)

The original government report that had sparked this OGLC response was not, in the end, proceeded with. However, the OGLC report remains as a very thorough study of library services and its recommendations remain as guidelines for library development.

The "freedom of information" movement in the late 1970s provided another opportunity for libraries to emphasize their role as information centres within the government. On September 5th, 1980, the OGLC Ad Hoc Committee on Freedom of Information produced a report entitled Ontario Government Libraries and Freedom of Information. The report emphasized the important role that government libraries should play in the freedom of information process. Each ministry library should be the location for a "Public Reading Room" where government documents provided under the freedom of information legislation would be available for public scrutiny. The report also reemphasized that copies of all ministry publications should be available in the library of the ministry concerned. Although the Ontario Government has yet to pass a freedom of information bill, several "Public Reading Rooms" are now

operating in various ministry libraries providing public access to special government documents.⁸

Over the past fourteen years, the OGLC has achieved most of its original aims and intentions. Once a collection of autonomous entities, today the government libraries share a sense of solidarity and cooperation. The Council has helped to raise the profile of libraries within the governmental structure. It has fostered a sharing of ideas and new technology. It has built networks better able to provide information to all government ministries and agencies. Through emphasis on continuing education and standards setting, the OGLC has helped to elevate the level of professionalism among government librarians, technicians and clerks. These are among the significant accomplishments of the past. For the future, the Council with a newly revised name⁹ will continue to emphasize past aims as well as continue to build awareness in the higher echelons of government of the importance of the government libraries as information centres serving both civil servants and the general public of Ontario.

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FOOTNOTES

¹Directory of Libraries and Resource Centres in the Government of Ontario. 3rd. ed. Toronto: Ontario Government Librarians' Council, 1983.

²See Appendix A for a complete list of the OGLC chairmen since 1970.

³This somewhat unusual title is based upon the Oxford English Dictionary's definition of "ogle": "to keep one's eyes open." The "new series" of OGLE began in May, 1971 (N.S. v.1, n.1).

⁴See footnote n. 1.

⁵Second edition, 1979.

⁶Second edition, 1980.

⁷See OGLE, v.2, n.2, April, 1972, pp. 5-6.

⁸OGLE, v.9, n.7, September, 1980, Appendix I.

⁹At its meeting on March 14, 1984, the Council changed its name to "Ontario Government Libraries' Council." This change had been debated for over a year and reflects that fact that the Council is composed of all the libraries in the Ontario Government, some of which are not always headed by a "librarian."

APPENDIX A

Chairmen of the Ontario Government Librarians' Council

1970-71	Jean R. Kerfoot	Legislative Library
1971-72	Iris Mason	Colleges and Universities
1972-73	Iris Mason	Colleges and Universities
1973-74	Lynne Truax	Community and Social Services
1974-75	Douglas Armstrong	Labour
1975-76	Stephanie Pavlin	Transportation and Communications
1976-77	Irene Shlapak	Community and Social Services
1977-78	Irene Shlapak	Community and Social Services
1978-79	Barbara Weatherhead	Treasury and Economics
1979-80	Mance Carbery	Government Services
1980-81	Tom Anderson	Correctional Services
1981-82	Veronica Brunka	Health
1982-83	Carol Fordyce	Education
1983-84	Sandra Louet	Natural Resources
1984-85	Brian Land	Legislative Library